Pennsylvania's Standards for Kindergarten

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Pennsylvania Department of Education
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Pennsylvania's Standards for Kindergarten

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Pennsylvania's Kindergarten Standards were developed as a joint project of the Departments of Education and Welfare in support of Governor Rendell's commitment to early childhood education and care. The Kindergarten Standards are meant to guide the development of kindergarten programs throughout the state. A Task Force consisting of early childhood practitioners, kindergarten teachers, school administrators, policy analysts, researchers and university faculty developed the standards. Support for the development of the standards was provided through the national Build Initiative, which is a multi-state partnership that helps states construct a coordinated system of programs and policies that respond to the needs of young children.

INTRODUCTION TO PENNSYLVANIA'S KINDERGARTEN STANDARDS

The Commonwealth of Pennsylvania is committed to establishing high academic standards for all students pre-K through grade 12. Research-based standards are the key to laying a strong academic foundation that will provide children with skills necessary to succeed in every phase of their lives.

Standards-based practices maximize student learning by:

- guiding teachers' deliberate and intentional instructional practice,
- supporting effective classroom environments, and
- framing teachers' age-appropriate expectations for their students

The kindergarten year is a critical one and is often the transition from home or pre-kindergarten into the formal school setting. Research has shown the value of active learning for both cognitive and social development. Children learn key skills of literacy, numeracy, and social problem solving through shared exploration and interaction with their environment in a naturalistic fashion. They develop their understanding of the world around them and how it relates to them by interacting with materials, other children and their teacher.

Kindergarten classrooms supported by the use of standards facilitate children's learning across key curricular areas while emphasizing rigorous literacy and numeracy experiences. They provide the kindergartner with opportunities to construct knowledge and meaning through active, hands-on exploration in a variety of configurations which include large and small group, individual and partner activities.

The most effective methods utilized by kindergarten teachers should include explicit instructional language, active engagement with students, and differentiated instruction that meets the needs of all learners while supporting high quality student expectations.

The learning behaviors that assure school success include:

- listening

- participation
- task persistence
- self-regulation
- making choices
- exhibiting self-control
- organization
- working with others
- respecting the rights, feelings and property of others

Teachers can support children's individualized learning opportunities by providing them with meaningful experiences that engage their interests, abilities and cultures. Teachers who have clear, age-appropriate expectations for children's behavior provide a balance of independence and guidance.

The goal of the Kindergarten Standards is to promote the development of a child who has the attributes of: inventiveness, curiosity, persistence, engagement, reasoning, problem solving, responsibility, imagination, and creativity. To assist the child in obtaining these attributes, the adult should approach the child's learning through actions that encourage the child to:

Invent	Fantasize	Conceive	Deliberate
Start	Encounter	Visualize	Adapt
Plan	Confront	Envision	Adjust
Lead	Persist	Commit	Inquire
Endure	Create	Think	Question
Analyze	Deduce	Deduct	

Classroom environments should stimulate the kindergartener's curiosity, initiative and inquiry and foster opportunities for adult-student interaction. Classrooms should be organized and structured to support all areas of development through a range of instructional techniques and strategies, be rich in literacy, and integrate literacy and numeracy throughout the day. They should provide children with a safe, comfortable atmosphere where they can practice newly acquired skills and build on them to learn new information

In addition to a robust set of standards to guide practice, kindergarten programs should utilize a system of assessment that is valid and reliable, comprehensive, developmentally appropriate and linguistically responsive in order to document a child's growth and development in relation to a defined set of standards. This assessment becomes the mechanism to inform and support instruction.

THE KINDERGARTEN STANDARDS

The Pennsylvania Kindergarten Standards are designed as a framework for quality in kindergarten programs and to provide guidance about what children should know or be able to do. The standards are inclusive of all children and are meant to be used to:

- inform teachers and administrators about curriculum and assessment, and to guide in the selection of instructional materials that promote an emphasis on cross-curricular integration,
- inform parents of appropriate expectations for kindergartners,
- support community and education partnerships by providing a common framework for discussions about curriculum, assessment and transition into kindergarten, and
- establish partnerships.

The Kindergarten Standards are NOT meant to be used:

- as a specific curriculum or to mandate specific teaching practices or materials,
- to prohibit children from entering first grade, nor
- to assess the competence of children or teachers.

RATIONALE FOR PERSONAL/SOCIAL LEARNING AND DEVELOPMENT

As a child participates in the ongoing classroom routine, the social curriculum supports the academic curriculum. The child who can negotiate interactions with a variety of adults and peers is better equipped to take advantage of the new knowledge base. By following classroom routines and rules, the child moves from whole group to small group to independent work with confidence and efficiency. This provides maximum opportunities for growth and development. By learning to negotiate conflicts and modify his/her behaviors, the child is better served in all environments. These standards provide direction for teachers to enhance this important aspect of learning.

RATIONALE FOR PARTNERSHIPS

The definition of *partnership* according to Webster is: "one or more persons owning jointly a business and who shares the risks and profits of the company or firm." All citizens in the Commonwealth are stakeholders in how effectively we are educating our youth. The result impacts families, communities, law enforcement agencies, social and health agencies, the job market, and both local and state government. The obvious responsibility of a formal education has been assigned to the local schools. Children, however, are exposed to many other

personal and cultural influences which impact learning. It is crucial to develop a system of communication and contact with the various participants who occupy a role in the development of a child.

A key component in the life of a young child is to provide a smooth transition from a Head Start/early care/pre-school experience to the public school. Research indicates that early-school adjustment often has a long-term effect on children. There needs to be a partnership established between the early care providers and school personnel in order to provide continuity between programs.

Parents, who are a child's first teacher, must be involved in the transition process. They must be recognized as an integral part of a child's educational life, and be informed of what the expectations are in a kindergarten program, including the Kindergarten Standards.

The school needs to establish a collaboration with health/social service agencies that have been involved with a child. This connection is necessary in order to address the full range of a child's needs and circumstances that will impact learning.

There needs to be staff development opportunities for kindergarten teachers and early care providers, preferably together. This will build a common knowledge base and provide a networking experience to discuss developmentally and culturally appropriate practices.

Teachers must be trained specifically to understand early childhood development, which is the responsibility of the institutions of higher learning. There should be a strong bond between the colleges and school districts in providing opportunities for student teaching experiences, and being cognizant through ongoing dialogue and feedback of what the specific curricular requirements/standards are, and how to achieve those standards in a classroom setting.

Community leaders and policymakers need to be aware of the importance of early childhood education and the standards for learning. The success of the local education system begins in the early years prior to a child entering kindergarten. Local leaders need to understand the diversity of children, yet realize the sense of urgency in assisting and supporting the education of young children.

KINDERGARTEN STANDARDS' LINK WITH PENNSYLVANIA'S ACADEMIC STANDARDS

Pennsylvania's Kindergarten Standards have been linked to both the Early Learning Standards for Pre-Kindergarten and the Third Grade Standards. The format has been built from the Pre-Kindergarten Standards and uses examples and supportive practices for classroom use. Teachers can utilize this information as a resource for instruction. Third Grade Standards have been noted at the top of each Standard in each Key Learning Area to enable practitioners to connect their kindergarten work with future learning requirements.

GUIDING PRINCIPLES

High quality kindergarten programs offer learning opportunities that have a significant impact on the success of all children. A warm, responsive relationship with a highly trained teaching staff is foundational. It is expected that teachers will intentionally integrate developmental knowledge with the attitudes, skills and concepts that children need to make steady progress socially, emotionally, physically and cognitively. Outstanding kindergarten programs maintain high expectations for all children using clear performance standards. A continuous cycle of assessment, which is understood by the professional staff and parents, must be utilized to track progress and success.

1. All children can learn and deserve high expectations that are age and culturally appropriate, taking into account individual differences.
2. Young children learn best through intentionally planned activities that enable them to construct knowledge through real life connections, peer interactions, meaningful play and active exploration of the environment.
3. The learning environment for young children stimulates and engages their curiosity about the world around them, and meets their physical and emotional needs whereby the children feel safe and secure.
4. Language and early literacy development is intentionally integrated throughout all aspects of kindergarten programs.
5. Children's development and learning is supported when their teachers are highly qualified, familiar with early childhood/education, and participate in ongoing opportunities for quality professional development.
6. High quality kindergarten programs recognize and provide for the individual needs of a diverse population of children, including English language learners, children with special needs, children from diverse cultural backgrounds and socio-economic groups, and children from various early care and educational settings.
7. High quality kindergarten programs are defined by a set of comprehensive standards that maximize children's growth and development across domains.
8. High quality kindergarten programs use an appropriate system of assessment that documents children's growth and development in relationship to a defined set of standards to guide teaching and learning.
9. Children's development, learning, knowledge and health are enhanced when a strong partnership exists between families, schools and communities.
10. High quality kindergarten programs have a collaborative relationship and ongoing communication between early care and education settings to provide a smooth transition of children and families into kindergarten.

**Footnote:

Young children with disabilities will meet standards consistent with their individualized education program (IEPs) goals developed by IEP teams in accordance with the federal Individuals with Disabilities Improvement Act (IDEIA) and Pennsylvania's Early Intervention Services System Act (Act 212 of 1990).

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EARLY CHILDHOOD ASSESSMENT FROM BIRTH TO AGE 8
EXECUTIVE SUMMARY

Developmental assessments are an integral part of the process which elevates an understanding of a child's competencies, and supports the design of learning environments which will help the child grow to his/her developmental potential, ranging from birth to age 8 or third grade. Assessments that are implemented in the classroom and aligned with Pennsylvania's Standards for learning (birth to age 8) will help inform teachers about how to construct a curriculum that provides multiple learning opportunities that accommodate the various learning styles which encompass the needs of all children.

Background

The overall purpose of assessment, regardless of age, is to help teachers make appropriate instructional decisions about how to best teach children. The principles and philosophy of assessment that we often apply to young children are part of a continuum that begins at birth and extends through kindergarten to third grade. Measurement, which includes both assessment and evaluation, of a young child's proficiency must rely upon practices that fit expected learning skills and behaviors, and allow for appropriate and expected changes to support children as they grow and develop. For example, young children learn and exhibit learning differently than older children. Young children learn by doing rather than just listening and may best exhibit what they know in manipulative actions rather than using verbal or written forms of testing. Assessment methods for children need to support these changes along the continuum to gather reliable data.

Assessment results can identify both the well-developed and least developed skills of children so that beneficial learning experiences and purposeful instruction can be individually planned and implemented. Assessment of children from birth to age 8 is conducted to plan beneficial opportunities for each child. Early childhood assessment is NOT conducted primarily for diagnostic purposes, that is, to determine whether the child has comparative deficits or delays in reference to peers his/her age. Furthermore, assessment is NOT conducted to classify the child's "readiness" for inclusion in an educational setting, and assessment is DEFINITELY NOT conducted to exclude the child from preschool or Kindergarten because of an erroneously presumed lack of readiness.

One particular aspect of assessment that often creates confusion is the use of screening instruments or "screeners". Screening instruments are generally characterized as being brief and cursory. These instruments are used for identifying those children who need additional testing, such as a diagnostic tool. More recently, screeners are used to assess whether a child's developmental readiness qualifies him/her to attend a specific educational program. School districts do not deny children entry to kindergarten based on the results of a readiness test (screener). However, assessment results from pre-kindergarten settings can inform kindergarten teachers about a child's developmental status. This information, used in conjunction with assessment data collected near the beginning of the kindergarten school year, can aid in the development of a curriculum that best suits each child.

Methods

The ideal method of assessing children is through ongoing authentic and naturalistic observations. In order to accurately describe the development and learning of children, these observations should occur during typical daily activities, including periods of formal/informal instruction and care routines. Assessment is not a single event. As children move into kindergarten and the primary grades, these types of assessments become more difficult to administer, but are not impossible. Norm-referenced testing, or testing to get a score, becomes more common place as children become older because of the need to assess large groups of children more quickly and to gather data that can indicate progress or lack thereof. As children progress through the grades, there are fewer opportunities to engage in ongoing, authentic assessments. Classrooms become more structured and there are fewer authentic-based instruments available for the older age group.

Parent involvement plays a critical role in assessment. Many parents lack an understanding of the purpose of assessment and what is expected and appropriate. The more that parents are included in the assessment process, the greater likelihood of their cooperation with the educational planning of their child. Parents and educators should work together as a team to fully understand a child's development.

Culture

Children from minority groups often present unique challenges in comparison to mainstream American children. For example, ethnically diverse children differ in their styles of interaction, such as speaking only when spoken to, being more passive, and preferring cooperative learning than competing with other children. Using authentic assessment methods is critical for children whose culture and language are different from the mainstream. Dynamic, active learning measures are preferred to standardized measures, and could help to decrease assessment bias against minority children. Authentic assessments are achievable in elementary grades, and may be of particular importance to ethnically diverse children to ascertain their developmental difficulties. Although these children will be required to participate in more standardized assessments used in many school districts; the use of authentic, observational methods should be included as a supplemental method for the culturally diverse population.

Curriculum

Curricula for children from birth to age 8 should fall along a continuum where learning activities change according to the developmental needs of the child. In the early learning years, there is a greater emphasis on the use of concrete materials and hands-on activities than of the more structured curriculum experienced in first through third grade, and to a lessor extent, kindergarten. The curriculum for children birth to age 8 should be multi-dimensional and include more than one prepackaged product available through a publisher. It must include content, methods, alignment with the Pennsylvania Standards for learning (birth to age 8), appropriate environments, and parent involvement to support the developmentally appropriate learning expectations. A curriculum defines the scope and sequence of what is taught, including specific goals in each content area. An important and underlying principle for instruction is to integrate the various subject areas into purposeful learning activities and strategies that provide a network of connected and effective learning for young children.

Summary

Assessment of young children is a critical component of learning, whether the assessment occurs when children are very young (birth) or during the primary grades in elementary school (through age 8/third grade). Assessment that informs teaching and the development of a curriculum that aligns with assessment provide the foundation for complying with the Pennsylvania Standards for learning (birth to age 8). No specific assessment will provide all of the answers, nor is the Department of Education advocating any particular assessment measure. Rather, thoughtful planning based upon best practices in assessment can lead to assessment systems and curriculum plans that meets a school district's needs, comply with Pennsylvania Standards for Learning, and benefit children, teachers, and parents in the process.

The full report "Early Childhood Assessment For Children From Birth to Age 8 (Grade 3)" can be viewed at
http://www.pde.state.pa.us/early_childhood/cwp/view.asp?a=179&Q=101706&early_childhoodNav=|3950|&early_childhoodNav=|

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Arts and Humanities

Pennsylvania's Kindergarten Standards

Arts and Humanities are an important component of children's early learning experiences. Children who are given opportunities to develop their imagination through a variety of media are learning to express their individuality in interests, abilities and knowledge. When they view others' work, children are also learning to appreciate and respect differences in culture and viewpoint. Arts and Humanities influence children's growing competence as creative problem solvers and learners. Teachers support kindergarten learners by providing ongoing opportunities that integrate arts and humanities into cross-curricular areas.

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ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Third Grade Standards:

- Knows the elements and principles in all art forms
- Creates and performs in all art forms
- Identifies themes in all art forms
- Knows the functions of rehearsals and practice in all art forms
- Knows safety issues in all art forms
- Identifies community performances and exhibitions in all art forms
- Uses technologies in all art forms

Content for Kindergarten	Examples	Supportive Practices
A. Develop using the elements of high and low space in dance B. Develop using the elements of high and low in space in dance	**The learner will:** ▪ Follow different movements of the teacher. ▪ Create movements that are fast or slow. ▪ Analyze how various objects move and try to move in that way. ▪ Participate in interpretive dance activities. ▪ Identify objects that move fast or slow.	**The teacher will:** ▪ Demonstrate movement using time, space and locomotion. ▪ Read a story about a particular animal and have students move like that animal. ▪ Provide opportunities for learners to watch and discuss presentations or videos of dance. ▪ Provide different kinds of music for learners to dance to. ▪ Provide props to use when dancing, such as ribbons, hoops, and sticks.

ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Content for Kindergarten	Examples	Supportive Practices
C. Practice using the elements of timbre (quality of sound; intensity and pitch) and rhythm (a regular recurrence of strong and weak beats)	**The learner will:** ▪ Sing and play instruments. ▪ Adjust timbre of voice to match a poem or song. ▪ Invent rhythm to accompany a favorite story or poem. ▪ Keep rhythm to a song or poem using body movements or instruments. ▪ Sing the melody of a song. Use instruments to demonstrate the melody of a song.	**The teacher will:** ▪ Demonstrate singing and sources of sound in music. ▪ Share a song or poem; have students clap the rhythm and adjust timbre of response to match the mood of the song or poem. ▪ Provide a variety of instruments for students to use, such as bells, chimes, shakers, and rhythm sticks. ▪ Provide opportunities to learn about vibrations with chimes, vocal chords, and rubber bands.
D. Develop an understanding of melody as an important musical element		
E. Develop using the elements of character, setting, and action in theater arts	▪ Act out parts of stories by inventing a voice and creating various facial expressions for the main character. ▪ Visualize the setting of the story; envision the details that could be seen in this setting and describe or illustrate them. ▪ Think about the particular actions in a story – act them out.	▪ Model the voices and facial expressions of characters while reading aloud . ▪ Model different voices during poems, stories, and songs. ▪ After sharing a story several times, have students repeat main character's repetitive lines. ▪ Model visualizing the setting of poems, stories, and songs. ▪ Provide opportunities for students to perform poems, plays, and stories.
F. Use the elements of line, shape, texture, and color	▪ Paint and draw works of art. ▪ Create a picture using lines and shapes. ▪ Create various textures in a picture using different media. ▪ Create a simple sculpture using clay and various tools to create texture. ▪ Use paints to create new shades and colors. ▪ Use color to create mood and setting in a picture.	▪ Model the use of line, shape, texture, and color. ▪ Define and demonstrate various textures (rough, smooth, shiny, hard, soft). ▪ Provide various found objects with different textures – sort by texture. ▪ Display artworks as inspiration for creative art. ▪ Provide a variety of media for students to use when creating art.

ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Content for Kindergarten	Examples	Supportive Practices
G. Create and perform music	**The learner will:** ▪ Express ideas and feelings through music. ▪ Use instruments to create a song.	**The teacher will:** ▪ Model examples of creating music. ▪ Provide instruments for students to use. ▪ Create different lyrics to a familiar song.
H. Create and perform a play	▪ Express ideas and feelings through actions. ▪ Create a play based on a familiar story. ▪ Use appropriate tone, actions, and speech to represent characters, setting, and plot in a play.	▪ Encourage learners to create plays based on stories read aloud. ▪ Provide materials to create settings and or simple costumes. ▪ Demonstrate to the students the role of the audience. ▪ Demonstrate to the students the role of the actors.
I. Create self-expressive images	▪ Create image of self. ▪ Express ideas and feelings through visual arts. ▪ Choose/use media to create images. ▪ Create pictures that define mood. ▪ Relate color to expression. ▪ Verbally explain the tone/mood of images	▪ Discuss characteristics and mood of famous portraits. ▪ Discuss qualities of artwork that conveys a mood. ▪ Use literature to provide examples of emotion.
J. Recognize and use fundamental vocabulary in dance	▪ Understand and practice non-locomotor movements: bend, twist, stretch, and swing. ▪ Understand and practice locomotor movements: walk, run, hop, jump, leap, gallop, slide, and skip. ▪ Understand and practice personal space. ▪ Describe dance using appropriate vocabulary.	▪ Describe and model the various movements (non-locomotor and locomotor). ▪ Help students understand the concept of personal space and use it in their vocabulary. Provide opportunities for learners to play movement games.

ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Content for Kindergarten	Examples	Supportive Practices
K. Recognize and use fundamental vocabulary in music	**The learner will:** ▪ Understand and use music vocabulary - fast/slow (tempo); high/low (pitch); short/long (duration); soft/loud (volume); strong/weak beat (rhythm). ▪ Understand and use vocabulary to describe types of voices: singing, speaking, whispering, and shouting.	**The teacher will:** ▪ Use and model appropriate music vocabulary when teaching. ▪ Provide opportunities for learners to practice different types of voices. ▪ Use a variety of instrumental and environmental examples in defining vocabulary.
L. Recognize and use fundamental vocabulary in theatre arts	▪ Understand and use theatre arts vocabulary -main characters, story, setting, performance, performer, and role play.	▪ Use appropriate theatre vocabulary as children create plays and performances. ▪ Use theatre vocabulary to discuss stories and poems shared in class.
M. Recognize and use fundamental vocabulary in visual arts	▪ Understand and use visual arts vocabulary - color, shape, line, and texture. ▪ Analyze artwork by identifying the color, shape, line or texture used. ▪ Name colors, shapes, kinds of lines, and textures, and sort pictures/objects accordingly.	▪ Use appropriate visual arts vocabulary when describing artwork. ▪ Provide a variety of examples of art. Use literature, illustrations, and other artworks to model vocabulary.
N. Identify patterns in dance	▪ Create a dance sequence with a beginning, middle, and end. ▪ Create repetitive motions for songs. ▪ Create movement patterns.	▪ Model and describe patterns and sequences used in dances. ▪ Relate patterns in dance to patterns in mathematics. ▪ Provide opportunities for learners to sing songs and recite poems with repetitive motions.

ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Content for Kindergarten	Examples	Supportive Practices
O. Identify rhythm and patterns in music	**The learner will:** ▪ Identify the rhythm of a known song and clap the pattern as the song is sung. ▪ Play rhythms with instruments. ▪ Copy rhythms modeled by the teacher.	**The teacher will:** ▪ Clap and describe the rhythm and pattern of a song. ▪ Play music with various rhythms. ▪ Relate patterns in music to patterns in mathematics. ▪ Provide instruments for rhythm exploration.
P. Identify word patterns in theatre arts	▪ Participate in shared readings. ▪ Identify repeated lines in text. ▪ Participate in plays with patterned script.	▪ Point out repetition of lines. ▪ Read stories and plays with word patterns.
Q. Identify color, line, and texture patterns in visual arts	▪ Analyze and describe artwork by defining the color, line, and texture patterns used. ▪ Create art with color, line, and texture patterns.	▪ Model how to look at a particular picture and identify the color, line, and texture patterns. Support learners making their own discoveries.
R. Identify the function and analysis of rehearsals and practice sessions in dance, theatre arts, and visual arts	▪ Understand the term “practice” and what it means in dance, theatre arts and in creating visual arts. ▪ Understand that practice sessions and rehearsals help better the performance. ▪ Self-analyze performance and the need for further practice.	▪ Model practice in dance and theatre arts. ▪ Facilitate a class discussion about practice and rehearsal. ▪ Tape practice sessions and rehearsals over time and discuss how practice fosters development.

ARTS AND HUMANITIES

9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts

Content for Kindergarten	Examples	Supportive Practices
S. Identify and perform safety issues in dance and theatre arts	**The learner will:** ▪ Know how to move safely. ▪ Know how to warm-up or stretch. ▪ Use appropriate spacing and proximity to others and objects. ▪ Use props appropriately.	**The teacher will:** ▪ Provide spacious locations for dance. ▪ Model appropriate warm-up and stretches. ▪ Demonstrate safety in terms of space and dance surfaces. ▪ Model appropriate handling of props.
T. Identify and perform safety issues in music and visual arts	▪ Handle and care for musical instruments and art tools with safety.	▪ Model safe care, handling and use of musical instruments and art tools. ▪ Facilitate class discussion about the care, handling, use of musical instruments and art tools.
U. Identify school and community performances and exhibitions for dance, music, and, theatre arts	▪ Identify the audience and the performers. ▪ Understand the roles of the audience and the performers.	▪ Take class to school assemblies and programs. ▪ Discuss the roles of the audience and the performers ▪ Provide families information about community performances.
V. Identify school and community visual arts exhibitions	▪ Select pieces of art work for display in school hallways. ▪ Show respect for artwork exhibited by other students throughout the school.	▪ Model how to self-select a best piece of artwork. ▪ Discuss the process of observing the artwork of others. ▪ Point out artwork in hallways, offices, and on field trips.
X. Identify how technologies in the arts help create performances and exhibitions	▪ Begin to understand how technologies can be used to create different effects in the arts.	▪ Model and describe how technologies can be used to create different effects in the arts.

ARTS AND HUMANITIES

9.2 Historical and Cultural Context of Works in the Arts

Third Grade Standards:

- Analyze a work of art from its historical and cultural perspective
- Identify and explain common themes in the arts, such as pattern, rhythm and color

Content for Kindergarten	Examples	Supportive Practices
A. Analyze a work of art from its historical and cultural perspective	**The learner will:** ▪ Analyze a painting to decide if it is about the world today or another time. ▪ Analyze a painting to decide if it is similar to one's own culture. ▪ Point out differences and characteristics of represented time period or culture.	**The teacher will:** ▪ Support learners in determining if a painting or illustration is present day or of another time. ▪ Lead students in discussion about how the art portrays the time period or culture.
B. Identify common themes and patterns in works in the arts	▪ Know and identify themes in works in the arts (e.g. singing, clapping, drawing, acting, and dancing patterns).	▪ Describe common themes and patterns that are repeated within each art form (e.g. color, designs, movements, lyrics and rhythms).

ARTS AND HUMANITIES

9.3 Critical Response to Works in the Arts

Third Grade Standards:

- Recognize critical processes used in the examination of works in the arts and humanities
- Know that works in the arts can be described by using the art's elements, principles, and concepts
- Know classification skills with materials and processes used to create works in the arts

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Create a critical statement about works in the arts	▪ Analyze by comparing and contrasting different works of art. ▪ Evaluate and form judgments about artwork.	▪ Model and describe analyzing two works of art. ▪ Facilitate class discussions during which works of art are analyzed.
B. Identify the elements, principles, and concepts used to describe works in the arts	▪ Use the elements, principles, and concepts when describing the arts (in music- identify repetition, volume, rhythm) (in art- identify line and color) (in dance- identify jumps and movements) (in theatre arts- identify characters, setting, and action).	▪ Model identification of elements, principles, and concepts in music, art, dance, and theatre arts.
C. Make categories or classifications about works in the arts	▪ Group similar works in the arts by sound, movement, instrument, texture or observation. ▪ Analyze book illustrations to determine if the illustrator is the same.	▪ Demonstrate and describe classification of works in the arts by categories (e.g. sound, movement, instrument, texture or observation).

ARTS AND HUMANITIES

9.4 Aesthetic Response to Works in the Arts

Third Grade Standards:

- Know how to respond to a philosophical statement about works in the arts and humanities
- Know how to communicate an informed individual opinion about the meaning of works in the arts
- Recognize that choices made by artists regarding subject matter and themes communicate ideas through works in the arts and humanities

Content for Kindergarten	Examples	Supportive Practices
A. Make a statement about works in the arts based on prior knowledge and how the art affects emotion	**The learner will:** ▪ Respond to works of art by expressing feelings (e.g. "this makes me feel happy because…";"this makes me feel sad because…"). ▪ Show respect for the responses of others to a work of art.	**The teacher will:** ▪ Model personal opinions about works of art. ▪ Encourage learners to respond to works of art by expressing emotions that the work evokes. ▪ Remind learners that there are many ways of seeing the same thing. ▪ Encourage children to think about how their response will affect others.
B. Communicate an individual opinion about the meaning of works in the arts	▪ Start statements about works of art using "I." ▪ Know how to show appreciation of works of arts.	▪ Model appropriate "I" statements. ▪ Model appreciation of works in the arts through notes, clapping and saying thank-you.
C. Begin to understand that artists make choices in all areas of arts	▪ Make choices about tools, instruments, mediums, movements, etc. for creative activities and performances. ▪ Analyze and describe why he/she selected certain tools, instruments, mediums, movements, etc.	▪ Model the decision making process that artists and performers use for creative activities and performances. ▪ After reading a favorite story or poem, have students break into four groups. Each group will use a different art form to tell all or part of the story – visual arts, theatre arts, music, or dance.

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Family-School-Community Partnerships

Kindergarten programs that foster home-school-community connections assure students' school success. Partnerships that create seamless experiences support Kindergarteners' learning. The link is established when parents and school staff share information about the child, family, home and school culture.

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FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

1. Parenting

Quality kindergarten programs will support families with parenting and child rearing skills.

School ***To support children, families, and communities the school will:***	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can:***
A. Assist families with parenting and child rearing skills (housing, health, nutrition, clothing, & safety).	▪ Exhibit interest in increasing knowledge and skills in parenting and child rearing. ▪ Acquire knowledge of child development. ▪ Establish home conditions that support children as kindergarten learners. ▪ Provide information and participate in activities to help schools understand the diversities that exist among children and families.	▪ Provide a variety of parenting and child rearing resources to families. ▪ Provide a variety of resources concerning child development. ▪ Provide a variety of resources concerning the establishment of home conditions that support children as kindergarten learners. ▪ Offer resources that help schools understand the diversities that exist among children and families.
B. Assist families in understanding child development.		
C. Assist families in setting home conditions that support children as kindergarten students.		
D. Provide information and activities to help schools understand children and families.		
E. Demonstrate an understanding of the diversity of family structures, styles, and cultural traditions.		

FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

2. Communication

Quality kindergarten programs will effectively communicate with families about school programs and student progress through school to home and home to school communications.

School ***To support children, families, and communities the school will*:**	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can:***
A. Communicate with families about school programs, assessments, children's progress, courses, activities, programs, etc.	▪ Engage in communications with school about programs, assessments, children's progress, courses, activities, programs, etc. ▪ Participate in two-way communication through conferences, memos, notices, report cards, news letters, phone calls, and computerized messages. ▪ Offer suggestions to improve the design and content of communications between school and home.	▪ Provide a variety of resources to enhance two-way communication between home/school/communities. ▪ Participate in frequent two-way communication with families and schools.
B. Promote two-way communication through conferences, memos, notices, report cards, news letters, phone calls, and computerized messages.		
C. Provide print and non-print communications that are clear and understandable to all families.		
D. Obtain ideas from families to improve the design and content of communications.		
E. Provide two-way channels of communication for questions and interactions.		
F. Create an inviting environment for families to engage in open dialogue.		

FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

3. Volunteering

Quality kindergarten programs will improve recruitment, training, work, and schedules to involve families as volunteers and audiences at the school or in other locations to support students and school programs.

School ***To support children, families, and communities the school will:***	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can:***
A. Expand recruitment, training, work, and schedules to involve families as volunteers and audiences at the school or in other locations (community, school, home) to support students and school programs.	▪ Assist administrators, teachers, parents, and students as aides, chaperones, lecturers, and tutors when possible. ▪ Assist with school programs. ▪ Attend assemblies, award presentations, celebrations, performances, sports events, and other events. ▪ Support school goals and children's learning.	▪ Offer a variety of resources to assist schools and families in their role of encouraging parents to serve as volunteers.

FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

4. Learning at Home

Quality kindergarten programs will involve families with their children in at-home interactive learning activities that support kindergarten skills and concepts.

School ***To support children, families, and communities the school will:***	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can:***
A. Involve families with their children in learning activities at home, including interactive learning activities and other curricular related activities and decisions.	▪ Participate with children in interactive learning activities at home to support kindergarten skills and concepts.	▪ Provide a variety of resources to support schools and families in their role as guides and co-learners of student learning at home.
B. Provide information concerning kindergarten skills and concepts.		
C. Stress that help at home is to support, encourage, and guide children's acquisition of kindergarten skills and concepts.		
D. Design and implement interactive learning activities for which students take responsibility to discuss important class work and ideas with their families.		
E. Create interactive activities that students share and discuss with others at home.		
F. Provide information concerning other skills and talents.		

FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

5. Decision Making

Quality kindergarten programs will include families as participants in school decisions, governance, and advocacy through PTA/PTO, school councils, committees, action teams, and other parent organizations.

School ***To support children, families, and communities the school will:***	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can*:**
A. Encourage involvement through PTA/PTO membership, participation, leadership, representation, advisory councils, school improvement teams, Title I councils, school-site management teams, and other independent school advisory groups.	▪ Become involved through PTA/PTO membership, participation, leadership, representation, advisory councils, school improvement teams, Title I councils, school-site management teams, and other independent school advisory groups. ▪ Participate in leadership training. ▪ View decision making as a shared process of taking action for the successful achievement of common goals for school improvement and student success.	▪ Provide a variety of resources for families and schools to both encourage and participate as shared decision makers.
B. Include parent leaders from all ethnic, racial, socio-economic, and other groups in the schools to serve as decision makers.		
C. Offer training for parent leaders to develop leadership skills.		
D. Understand decision making is a shared process of taking action for the successful achievement of common goals for school improvement and student success.		

FAMILY-SCHOOL-COMMUNITY PARTNERSHIPS

6. Collaborating with the Community

Quality kindergarten programs will coordinate community resources and services for students, families, and the school with businesses, agencies, and other groups, and provide services to the community. Special attention will be given to facilitate successful transitions from one setting to another.

School ***To support children, families, and communities the school will:***	**Family** ***To support children the family can:***	**Community** ***To support children, families, and schools the community can:***
A. Contribute to the community through service learning and special projects aimed at sharing talents and solving local problems.	▪ Contribute to the community through service learning and special projects aimed at sharing talents and solving local problems. ▪ Use knowledge of local resources to increase personal skills and talents or to obtain needed services for family.	▪ Contribute to students, families, and schools through partnerships involving businesses, community agencies, cultural groups, health services, recreation, and other groups and programs. ▪ Work to solve problems of turf, responsibilities, goals, and funds. ▪ Provide multiple avenues for informing families and students about community programs and services, and ensure equal opportunities for services and participation.
B. Work to solve problems of turf, responsibilities, goals, and funds.		
C. Inform all families and learners about community programs and services, and ensure equal opportunities for services and participation.		
D. Use community resources for improving curriculum and instruction.		
E. Employ strategies that enable students to learn about and contribute to the community.		
F. Facilitate transitions between preschool and kindergarten and between kindergarten and grade one.		

Health, Safety and Physical Education

Pennsylvania's Kindergarten Standards

Children's learning is affected by their physical health and well-being. Kindergarten students need to learn about their bodies and the behaviors necessary to protect them and keep them healthy as well as have opportunities to develop basic body control, and expand their developing motor skills while increasing strength, endurance and flexibility. Health and safety activities must be integrated throughout the day as teachers model healthy and safe practices and promote healthy lifestyles for children.

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HEALTH, SAFETY AND PHYSICAL EDUCATION

10.1 Concepts of Health

Third Grade Standards:

- Identify and describe the stages of growth and development
- Identify and know the location and function of the major body organs and systems
- Explain the role of the food guide pyramid in helping people eat a healthy diet
- Know age appropriate drug information
- Identify types and causes of common health problems of children

Content for Kindergarten	Examples	Supportive Practices
A. Identify and describe ways individuals grow physically, mentally, socially, and emotionally	**The learner will:** ▪ Participate in interactive activities that show how people grow and change. ▪ Participate in interactive activities that highlight unique ways people grow and change. ▪ Describe ways in which people are physically the same and different.	**The teacher will:** ▪ Read fiction and non-fiction that describe how individuals grow and develop. ▪ Provide interactive activities (e.g., discussions, puppetry, picture cards) that highlight ways individuals grow and develop (physically, mentally, socially, and emotionally). ▪ Facilitate class discussions highlighting the uniqueness of people.
B. Identify and describe unique ways individuals grow physically, mentally, socially, and emotionally		
C. Identify and locate basic body parts and body organs	▪ Locate basic body parts on one's body. ▪ Describe the basic function of body parts and body organs.	▪ Create interactive activities (e.g., songs, building models) to teach body part recognition. ▪ Read non-fiction that name and describe the function of body parts and organs.
D. Begin to develop an understanding of the basic function of body parts and body organs		

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.1 Concepts of Health *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Describe why the body needs food F. Recognize that there are a variety of foods that can be grouped	**The learner will:** ▪ Describe the concept of balancing energy intake eating) and energy output (physical activity). ▪ Sort food cards into categories.	**The teacher will:** ▪ Read fiction and non-fiction books that focus on food choices and the role of food in keeping one healthy. ▪ Expose learners to various foods.
G. Develop an understanding of the importance of eating healthy and the role of food in keeping the body healthy H. Develop an understanding of the importance of drinking water to keep the body healthy	▪ Classify foods as nutritious or not nutritious. ▪ Identify nutritious snacks and beverages.	▪ Facilitate class discussions about maintaining a healthy body through the foods and beverages we drink. ▪ Provide healthy snacks and beverages.
I. Begin to know how to properly use medicine (e.g., who takes medicine, who gives medicine)	▪ Identify grown-ups who can give him/her medicine. ▪ Demonstrate how to say no to drugs. ▪ Identify healthy/unhealthy risk-taking behaviors (e.g., smoking, alcohol).	▪ Facilitate class discussions pertaining to healthy risks (trying out for a sport team) and unhealthy risks (taking someone else's medicine). ▪ Read literature related to decision-making, saying no, healthy choices or risk-taking.
J. Identify childhood illnesses	▪ Identify signals of illnesses. ▪ Know that germs can make someone ill. ▪ Identify ways that germs can spread.	▪ Facilitate class discussions pertaining to the spreading of germs. ▪ Read literature related to getting and being sick.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.2 Healthful Living

Third Grade Standards:

- Identify personal hygiene practices and community helpers that promote health and prevent the spread of disease
- Identify health-related information
- Identify media sources that influence health and safety
- Identify the steps in a decision-making process
- Identify environmental factors that affect health

Content for Kindergarten	Examples	Supportive Practices
A. Know the relationship between personal health practices and being healthy	**The learner will:** ▪ Participate in class discussions about things one can do to stay healthy and prevent illnesses. ▪ Identify healthy and unhealthy personal health practices (e.g., the spreading of germs, taking drugs, etc.). ▪ Role-play, with props, health care providers (e.g., nurse, doctor, police, family, and physical education teacher).	**The teacher will:** ▪ Read literature related to personal health practices, preventing illness, and community helpers. ▪ Create learning centers that focus on health hygiene practices (e.g., brushing teeth, flossing teeth). ▪ Create interactive tasks on how to prevent the spread of germs and illness. ▪ Provide opportunities and materials for children to role-play with sample props. ▪ Model good health practices (e.g. hand-washing, covering mouth during cough).
B. Identify ways to prevent illness		
C. Know and use personal health practices		
D. Identify people that help to keep us healthy and safe		

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.2 Healthful Living *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Identify common health related signs, symbols, and products that help keep the body healthy	**The learner will:** ▪ Role-play, with props, using health care products and signs. ▪ Describe and tell how which products help keep one's body healthy.	**The teacher will:** ▪ Provide opportunities and materials for learners to match health care products to proper use. ▪ Invite community health care providers into the classroom to describe what they do and the tools they use.
F. Know that what we hear and what we see affects our health and safety	▪ Identify different media sources that influence our choices (e..g., TV, video, advertisements, commercials).	▪ Talk with learners about how different media sources, e.g. TV, video, advertisements, and commercials influence our choices.
G. Know, demonstrate, and identify the steps of a decision- making process	▪ Explain when to ask for help in the decision-making process. ▪ Work in a cooperative manner with classmates to make a decision. ▪ Know the difference between a safe or healthy decision and an unhealthy or dangerous decision. ▪ Predict the outcome of a decision.	▪ Read literature related to making decisions and safe choices. ▪ Create scenarios and guide learners through the decision-making process. ▪ Engage learners in predicting outcomes of decisions.
H. Identify things in the environment that can be harmful.	▪ Describe things in the environment that can be harmful (e.g., loud noise, tobacco smoke, pollution, temperature, insects). ▪ Describe ways to protect oneself from harmful factors in the environment.	▪ Engage learners in class discussions to describe ways to protect oneself from harmful factors in the environment. ▪ Read literature related to the theme of environment and health. ▪ Engage learners in interactive activities to first identify the harmful factor and then to find ways of protection.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.3 Safety and Injury Prevention

Third Grade Standards:

- Identify types and causes of common health problems of children
- Recognize safe/unsafe practices in the home, school, and community
- Recognize emergency situations and explain appropriate responses
- Recognize conflict situations and identify strategies to avoid or resolve
- Identify and use safe practice in physical activity settings

Content for Kindergarten	Examples	Supportive Practices
A. Know and demonstrate the importance of rules to ensure safety	**The learner will:** ▪ Know fire safety practices. ▪ Know and demonstrate what to do when the fire alarm sounds. ▪ Know ways to stay safe at home. ▪ Know safe ways to answer the phone. ▪ Know how to be safe when walking, riding bicycles, and riding in vehicles. ▪ Know safety practices when playing outdoors, including on a playground. ▪ Know safety practices regarding animals. ▪ Know what to do in bad weather. ▪ Know water safety practices. ▪ Know how to be safe from a stranger. ▪ Understand what a bully is and know how to deal with one.	**The teacher will:** ▪ Model and discuss the importance of safety rules and practices. ▪ Read literature about strangers, bullies, and safety rules for public places. ▪ Design interactive tasks that will provide learners opportunities to practice safety rules and behaviors.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.3 Safety and Injury Protection *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Recognize an emergency situation	**The learner will:** ▪ Identify situations as emergency or not an emergency. ▪ Describe ways to respond to emergencies (e.g., get an adult, call 911). ▪ Work cooperatively with classmates to show how to respond to emergencies.	**The teacher will:** ▪ Provide opportunities and props for learners to role play responding to emergencies and first aid situations. ▪ Provide opportunities for learners to make reminders (magnet, sign) to place near the phone for placing an emergency phone call. ▪ Read fiction and nonfiction that describes emergency situations, what to do, and how to respond safely.
C. Recognize conflict situations and identify strategies to resolve them	▪ Identify conflict situations. ▪ Work to solve conflict without physical actions. ▪ Use verbal and non-verbal communication skills used in problem solving (e.g., eye contact, "I" statements, tone, pace of voice, body language).	▪ Read fiction and nonfiction that addresses conflict and/or bullying situations. ▪ Create home, school, neighborhood, etc. scenarios for learners to role play using appropriate strategies to solve conflicts. ▪ Facilitate classroom discussions to create classroom rules to resolve conflicts.
D. Identify and demonstrate safe practices in physical activity	▪ Know and demonstrate the difference between safe and unsafe practices. ▪ Avoid actions that might lead to accidents. ▪ Follow safe practices in all school areas. ▪ Utilize safe practices when participating in physical activities.	▪ Read fiction and nonfiction that addresses the safety in physical activity. ▪ Facilitate class discussions about the use of safety practices. ▪ Create an environment in which all learners feel safe.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.4 Physical Activity

Third Grade Standards:

- Identify and engage in physical activities that promote physical fitness and health
- Know the positive and negative effects of regular participation in moderate to vigorous physical activities
- Know and recognize changes in body responses during moderate to vigorous physical activity
- Identify likes and dislikes related to participation in physical activities
- Identify reasons why regular participation in physical activities improves motor skills
- Recognize positive and negative interactions of small group activities

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Recognize and demonstrate appropriate physical activities that promote fitness and health	▪ Participate in physical activities that promote fitness and health during outdoor time. ▪ Keep a log of physical activities that promote fitness and health while at home.	▪ Provide inside and outside opportunities for learners to engage in physical activities that promote health. ▪ Facilitate class discussions that focus on how physical activity improves health. ▪ Encourage learners to participate in physical activities. ▪ Read related fiction and nonfiction books.
B. Recognize the physiological effects of moderate to vigorous physical activity on the body (e.g., fast heart rate, heavy or increased breathing, sweating)	▪ Describe physical differences felt after participating in moderate to vigorous physical activities (e.g., fast heart rate, heavy or increased breathing, sweating). ▪ Compare changes that occur in the body for different physical activities.	▪ Provide opportunities for learners to compare and contrast different types of physical activities on their body(e.g., fast heart rate, heavy or increased breathing, sweating). ▪ Facilitate classroom discussions related to the physiological effects of different types of exercises.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.4 Physical Activity *(continued)*

Content for Kindergarten	Examples	Supportive Practices
C. Identify physical activities that are liked and disliked	**The learner will:** ▪ Identify physical activities that are liked and describe why. ▪ Identify physical activities that are disliked and describe why.	**The teacher will:** ▪ Provide a variety of physical activities. ▪ Provide learners opportunities to reflect on physical activities. ▪ Have learners evaluate whether the activity was liked or disliked and to describe why.
D. Know that appropriate practice and regular participation positively impacts motor skills	▪ Try new gross and small motor activities. ▪ Participate in gross and fine motor physical activities. ▪ Continue to practice new gross motor and fine motor skills even when the skill becomes difficult.	▪ Facilitate group conversations pertaining to the importance of practice and regular participation for improving motor skills. ▪ Provide opportunities for learners to practice the same skill in different ways.
E. Recognize positive and negative interactions of small group activities	▪ Work cooperatively and productively with a partner or small group to complete a task and/or solve a problem.	▪ Design activities that facilitate partner and small group work. ▪ Design activities that promote sharing, taking runs, cooperation, task persistence and listening skills. ▪ Facilitate class discussions highlighting positive group behaviors. ▪ Facilitate class discussions problem solving fictitious challenging small group interactions.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.5 Concepts, Principles & Strategies of Movement

Third Grade Standards:

- Recognize and use fundamental motor skills and movement concepts
- Recognize and describe the concepts of motor skill development using appropriate vocabulary
- Know the function of practice
- Identify and use principles of exercise to improve movement and fitness activities
- Know and describe scientific principles that affect movement and skills using appropriate vocabulary
- Recognize and describe game strategies using appropriate vocabulary

Content for Kindergarten	Examples	Supportive Practices
A. Recognize and use fundamental motor skills and movement concepts B. Know that relationships refer to the ways the individual, while moving, relates with other people and the environment C. Know, recognize and use demonstrate relationship movement concepts (e.g., narrow, wide, over, under, leading, following)	**The learner will:** ▪ Participate in all locomotor and nonlocomotor/stability skills (e.g., walking, running, hopping, skipping, turning, twisting, bending, balancing, etc.). ▪ Recognize and demonstrate space awareness in and out of the classroom. working cooperatively and productively with a partner or small group to solve a problem .	**The teacher will:** ▪ Provide opportunities for learners to participate in a variety of motor activities. ▪ Create opportunities for learners to participate in a variety of rhythmical, expressive and creative dance experiences and educational gymnastics. ▪ Use different types of equipment (long & short handled bats & rackets; varied ball sizes, etc.) in order for children to have the option of choice. ▪ Provide opportunities for exploration and discovery of the range of possibilities within a skill theme (i.e., ways to toss and catch an object). ▪ Utilize ongoing formative assessment. ▪ Infuse moderate to vigorous movement (i.e., infuse fitness into child-centered activities) into learning experiences.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.5 Concepts, Principles & Strategies of Movement *(continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Understand that people may differ even though they are the same age E. Know that practice and experience make you better at motor skills F. Know that when you first begin to learn a motor skill, you will not be good at it G. Know, recognize, and demonstrate that some skills are used in many different activities H. Understand that critical elements are cues that help students to learn a skill or to perform better I. Understand that feedback lets us know how we are doing on a task and is helpful in improving a skill	**The learner will:** ▪ Listen to instructions, following class rules, procedures and safe practices. ▪ Accept all teammates and playmates regardless of race, gender, ability, disability or other differences. ▪ Work cooperatively and productively with a partner or small group to solve a problem until completion of the task. ▪ Respond to teacher-initiated questions. ▪ Complete assessments. ▪ Use correct vocabulary.	**The teacher will:** ▪ Provide instruction on motor skill development that is developmentally appropriate. ▪ Repeat the critical elements during a lesson (i.e., focus). ▪ Provide opportunities for students to give feedback to partners. ▪ Assess student work based on the critical elements of a skill (e.g., through a drawing, student demonstration). ▪ Create an environment in which children feel safe to try new activities.

HEALTH, SAFETY AND PHYSICAL EDUCATION

10.5 Concepts, Principles & Strategies of Movement *(continued)*

Content for Kindergarten	Examples	Supportive Practices
J. Know and demonstrate that appropriate practice helps to improve skills	**The learner will:** ▪ Actively engage in practice opportunities during class and outside of school. ▪ Actively engage in practice opportunities outside of school. ▪ Practice specific skills as assigned until the teacher signals the end of practice.	**The teacher will:** ▪ Provide many practice opportunities. ▪ Encourage students to practice skills during class and outside of school. ▪ Design creative practice opportunities that are varied, motivating, and novel, therefore, motivating children to continue practicing. ▪ Provide instruction on the function of practice.
K. Know that the amount of time a person practices affects the ability to perform the skill		
L. Know that how often we exercise affects how we improve	▪ Actively participate in all activities. ▪ Work cooperatively with a partner or small group to solve a problem until completion. ▪ Listen to instructions, following class rules, procedures and safe practices. ▪ Continue to try when an activity becomes difficult.	▪ Provide instruction on the principles of exercise. ▪ Design learning experiences that focus on each of the principle components. ▪ Use music to motivate children to move for longer periods of time. ▪ Have children and guardians/families keep an activity calendar (i.e., How often do I participate in activity?) ▪ Encourage students to participate in physical activity outside of school.
M. Know and demonstrate that frequency, intensity, and duration of exercise affects how we improve		
N. Know that how hard we exercise affects how we improve		
O. Know that how long we exercise affects how we improve		
P. Know that what kind of exercise is used affects how we improve		

HEALTH, SAFETY AND PHYSICAL EDUCATION

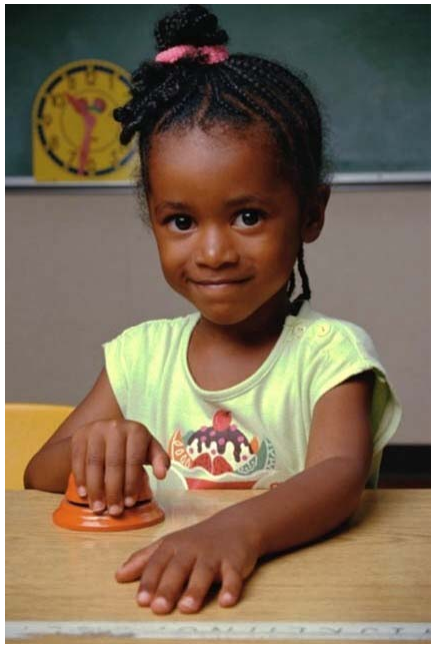
10.5 Concepts, Principles & Strategies of Movement *(continued)*

Content for Kindergarten	Examples	Supportive Practices
Q. Know and demonstrate that gravity affects movement and skills	**The learner will:** ▪ Actively participate in all learning experiences. ▪ Listen to instructions, following class rules, procedures and safe practices. ▪ Use proper vocabulary.	**The teacher will:** ▪ Provide developmentally appropriate instruction related to scientific principles. ▪ Design developmentally appropriate learning experiences in which children explore gravity, force and balance. ▪ Provide students critical elements related to scientific principles.
R. Know and demonstrate that force affects movement and skills		
S. Know and demonstrate how to absorb force		
T. Know and demonstrate that balance affects movement and skills		
U. Know how to maintain balance		
V. Know and demonstrate what it means to move to an open space	▪ Listen to instructions, following class rules, procedures and safe practices. ▪ Accept all teammates and classmates regardless of race, gender, ability, disability or other differences**.** ▪ Actively participate in all learning experiences. ▪ Work in a diverse group setting without interfering with others. ▪ Work cooperatively with a partner or small group to solve a problem until completion.	▪ Provide educational experiences that emphasize cooperative (partner & small group) games. ▪ Provide educationally appropriate games that use simple rules. ▪ Design educational experiences that emphasize "moving in and to an open space." ▪ Select, design and modify games to maximize the attainment of specific learning objectives.
W. Model and understand the purpose of rules		

WORKING DRAFT

Mathematics

Pennsylvania's Kindergarten Standards



Mathematical learning in Kindergarten relies on children's opportunities to describe and explore the relationships of objects and materials. Students' knowledge and understanding of mathematics is built through children's active manipulation in the areas of numbers and operations; patterns and functions; algebra; geometry; measurement; data analysis and probability. Teachers facilitate mathematical learning when they encourage children to problem solve, reason, communicate, connect and represent.

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MATHEMATICS

2.1 Numbers, Number Systems and Number Relationships

Third Grade Standards:

- Count using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's.
- Use whole numbers and fractions to represent quantities.
- Represent equivalent forms of the same number through the use of concrete objects, drawings, word names and symbols.
- Use drawings, diagrams or models to show the concept of fraction as part of a whole.
- Count, compare and make change using a collection of coins and one-dollar bills.
- Apply number patterns (even and odd) and compare values of numbers on the hundred board.
- Use concrete objects to count, order and group.
- Demonstrate understanding of one-to-one correspondence.
- Apply place-value concepts and numeration to counting, ordering and grouping.
- Estimate, approximate, round or use exact numbers as appropriate.
- Describe the inverse relationship between addition and subtraction.
- Demonstrate knowledge of basic facts in four basic operations.

Content for Kindergarten	Examples	Supportive Practices
A. Count using whole numbers (to 100) by ones and tens (rote counting) B. Use concrete objects to represent quantities up to and including 20 C. Represent equivalent forms of the same number through the use of concrete objects and drawings up to and including 20	**The learner will:** ▪ Practice group and individual rote counting experiences (daily counts, objects in the classroom). ▪ Represent a given number up to twenty with manipulatives. ▪ Use manipulatives to demonstrate one-to-one correspondence. ▪ Examine an object and successfully split it in half.	**The teacher will:** ▪ Provide opportunities and support learner's counting during daily everyday activities. ▪ Model, using the appropriate language/vocabulary, the process of counting with one-to-one correspondence, and write the number signifying that amount. ▪ Provide opportunities and support learners matching and counting objects (passing out snacks, counting manipulatives).

MATHEMATICS

2.1 Numbers, Number Systems and Number Relationships *(continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Use concrete objects to separate a set into two equal parts using the terms half and whole	**The learner will:** ▪ Analyze a set of objects and successfully divide them in half. ▪ Create sets of ten with manipulatives. ▪ Count a set of manipulatives to match a given number. ▪ Count manipulatives and establish a number- to -object relationship. ▪ Use manipulatives to find before, after, and between on a number line. ▪ Make a reasonable estimation of how many objects are in a container. ▪ Observe the different characteristics of the penny, nickel, dime and quarter and identify them by name and their given value. ▪ Count by ones and tens to identify an amount of money.	**The teacher will:** ▪ Provide opportunities and support learners counting with one-to-one correspondence during classroom activities. ▪ Provide opportunities and support learners using a variety of math manipulatives. ▪ Draw representations to explore one-to-one correspondence. ▪ Provide opportunities, and support learners counting, reading, and writing numbers during various classroom activities. ▪ Provide opportunities and support learners creating groups of ten during classroom activities. ▪ Model, using the appropriate language/vocabulary, the processes of separating sets into equal parts. ▪ Use correct mathematical language (half, whole, equal/equivalent parts). ▪ Model, using the appropriate language, the processes of creating and naming patterns. ▪ Provide and support learners during a variety of experiences with patterns (visual, auditory, tactile, kinesthetic).
E. Use concrete objects to group into sets of ten		
F. Use concrete objects to demonstrate understanding of one-to-one correspondence up to and including 20		
G. Count, read, and write whole numbers 0 to 20		
H. Identify numbers before, after, and between 0 – 20		
I. Estimate using concrete objects up to 100		
J. Identify pennies, nickels, dimes, and quarters by name and value		
K. Count pennies and dimes		

MATHEMATICS

2.2 Computation and Estimation

Third Grade Standards:

- Apply addition and subtraction in everyday situations using concrete objects.
- Solve single- and double- digit addition and subtraction problems with regrouping in vertical form.
- Demonstrate concept of multiplication as repeated addition and arrays.
- Demonstrate concept of division as repeated subtraction and as sharing.
- Use estimation skills to arrive at conclusions.
- Determine the reasonableness of calculated answers.
- Explain addition and subtraction algorithms with regrouping.

Content for Kindergarten	Examples	Supportive Practices
A. Make estimates of objects in a set up to and including 20 B. Make an estimation and verify by counting C. Represent addition and subtraction in everyday situations using up to ten concrete objects D. Use concrete objects to explain the results of joining and separating sets of objects in quantities up to and including ten E. Separate concrete objects into equal groups	**The learner will:** ▪ Estimate how many objects are in a group. ▪ Check estimate by counting the number of objects. ▪ Use counters to make sets up to ten. ▪ Use counters to solve simple math stories. ▪ Draw pictures of two sets of objects, count them together, and explain the process of joining the sets (how many objects are in each group and how many were all together when the two sets were joined). ▪ Explore the concepts of addition and subtraction by joining and separating sets. ▪ Combine two sets of objects (up to five) and find the sum. ▪ Separate a pile of counters into two equal piles. ▪ Use counting manipulatives to create two sets of the same number, then count them to determine the sum.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of estimation. ▪ Provide opportunities, and support learners in estimating a quantity. ▪ Provide support for learners estimating and counting the number of objects. ▪ Model, using the appropriate language/vocabulary, the processes of adding, subtracting, and dividing sets. ▪ Create real life addition and subtraction problems for learners to solve by using pictures and/or concrete manipulatives. ▪ Identify everyday classroom opportunities that involve the operation of addition and/or subtraction. ▪ Provide opportunities, and support learners using counters or objects to make and count sets.

MATHEMATICS

2.2 Computation and Estimation *(continued)*

Indicator	Examples	Supportive Practices
F. Determine the sum of the same two one-digit numbers using concrete objects and/or pictures (3+3=6)	**The learner will:**	**The teacher will:** . ▪ Provide opportunities, and support learners separating sets of objects and/or counters into two equal groups. ▪ Create addition problems that join two sets of the same amount of objects. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasksProvide opportunities for learners to explore and apply understanding of joining, subtracting, and dividing sets in learning centers.

MATHEMATICS

2.3 Measurement and Estimation

Third Grade Standards:

- Compare measurable characteristics of different objects on the same dimensions (time, temperature, area, length, weight, capacity, and perimeter)
- Determine the measurement of objects with nonstandard and standard units (e.g., US customary and metric)
- Determine and compare elapsed times
- Tell time (analog and digital) to the minute
- Determine appropriate unit of measure
- Use concrete objects to determine area and perimeter
- Estimate and verify measurements
- Demonstrate that a single object has different attributes that can be measured in different ways (e.g., length, mass/weight, time, area, temperature, capacity, perimeter)

Content for Kindergarten	Examples	Supportive Practices
A. Understand the spatial concepts of over, under, beside, in, out, around, on and between	**The learner will:** ▪ Engage in teacher-led activities, such as Simon Says, that use spatial words (example: "stand in the circle"). ▪ Use positional vocabulary to describe the relative positions of objects ("The book is on the chair.") ("I am in front of Amanda."). ▪ Collect two classroom objects and compare them by a defined characteristic (length, height, weight). ▪ Explore objects to determine which will make a good measuring tool.	**The teacher will:** ▪ Incorporate spatial concept words into directions throughout the day. ▪ Incorporate comparative and spatial vocabulary to compare, locate, and identify positions in space. ▪ Use gross motor activities to help children understand and internalize comparative and positional words and phrases. ▪ Emphasize the daily use of positional words. ▪ Model the processes of measurement using standard and nonstandard tools and units while using the appropriate language/vocabulary. ▪ Provide interesting objects for comparison.
B. Compare two objects using direct comparison		
C. Estimate and measure objects using nonstandard units		

MATHEMATICS

2.3 Measurement and Estimation (*continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Determine the length and height of objects with nonstandard units (e.g. hands, shoe lengths, jelly beans)	**The learner will:** ▪ Use multiple units of the same size (nonstandard units) to measure (paperclips, unifix cubes). ▪ Use nonstandard units to estimate the length of and object. ▪ Investigate the different ways to measure the various attributes of an object. ▪ Compare the measurement of different classroom objects. ▪ Use comparison vocabulary to describe how objects are related by length or height. ▪ Select appropriate tools for the attribute being measured (e.g. clock to tell time, scale to weigh, measuring cups to help bake a cake). ▪ Recognize parts of the day and discuss activities that occur in the morning, afternoon, and night. ▪ Participate using the calendar. Identify the season, the month, and the date of today, tomorrow, and yesterday. ▪ Observe natural phenomena such as the changing of trees and sunrise/sunset.	**The teacher will:** ▪ Demonstrate how to measure objects starting at an end point and adding on cubes until the cubes are equal in length to the object they are measuring. ▪ Design and provide activities to help children recognize the attributes of length, weight, time, and volume. ▪ Provide opportunities, and support learners in determining the appropriate measurement tool. ▪ Provide cooking and mixing activities that use measurement for real life purposes. ▪ Create measurement math stories that require students to determine which measuring tool to use (“What would I need to do to find out how long I brush my teeth in the morning?”). ▪ Provide opportunities, and support learners in using standard and nonstandard units to measure objects by more than one attribute. ▪ Engage children in thinking about the concept of time (number of days at school, season, days of the week, month).
E. Describe the instruments used for measuring time, length, weight, volume, and temperature		

MATHEMATICS

2.3 Measurement and Estimation (*continued)*

Content for Kindergarten	Examples	Supportive Practices
	The learner will: ▪ Use pictures, drawings, and words to depict events in the order of occurrence. ▪ Initiate and respond to questions about the order of events occurring throughout the day. ▪ Manipulate clocks in the math center. ▪ Arrange their individual clocks to match the teacher's demonstration clock. ▪ Generate solutions to problems that might arise if we do not pay attention to time.	**The teacher will:**

MATHEMATICS

2.4 Mathematical Reasoning and Connections

Third Grade Standards:

- Make, check and verify predictions about the quantity, size, and shape of objects and groups of objects
- Use measurements in everyday situations (e.g. determine the geography of the school building)

Content for Kindergarten	Examples	Supportive Practices
A. Use math vocabulary comparison terms when making predictions regarding the quantity, size, and shape of objects B. Identify the use of measurement in everyday situations	**The learner will:** ▪ Analyze the size of the container and the objects inside when making an estimate as to the amount. ▪ Examine the object being measured to determine the appropriate tool and approach. ▪ Make an estimate by considering the size of the object(s) and its container.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of estimation (size of object, size of container, comparisons of size of containers). ▪ Engage learners in recognizing and applying measurement in everyday situations. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks. ▪ Provide opportunities for learners to explore and apply understanding of estimating and measurement.

MATHEMATICS

2.5 Mathematical Problem Solving and Communication

Third Grade Standards:

- Use appropriate problem solving strategies (e.g., guess and check, working backwards)
- Determine when sufficient information is present to solve a problem and explain how to solve a problem
- Select and use an appropriate method, materials and strategy to solve problems, including mental mathematics, paper and pencil, and concrete objects

Content for Kindergarten	Examples	Supportive Practices
A. Identify a problem and analyze possible solutions to determine which is most appropriate	**The learner will:** ▪ Identify and think about possible solutions to solve daily problems occurring in and out of the classroom. ▪ Describe the steps necessary to solve a problem. ▪ Utilize different strategies and approaches to solve daily problems occurring in and out of the classroom.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of identifying and solving a problem. ▪ Facilitate classroom discussion to identify the necessary steps and the appropriate order to solve problems occurring in and out of the classroom. ▪ Create and provide opportunities for learners to engage in problem solving activities. ▪ Highlight the process versus the product of an activity. ▪ Ask open-ended questions, encourage conversations, and create classroom activities that encourage learners to explore a variety of possible solutions. ▪ Encourage and support learners to explain their mathematical thinking and work. ▪ Provide opportunities for learners to explore and apply understanding of problem solving throughout the school day.
B. Identify what information is needed to solve a problem		
C. Demonstrate various strategies to solve a problem		

MATHEMATICS

2.6 Statistics and Data Analysis

Third Grade Standards:

- Gather, organize, and display data using pictures, tallies, charts, bar graphs, and pictographs
- Formulate and answer questions based on data shown on graphs
- Predict the likely number of times a condition will occur based on the analyzed data
- Form and justify an opinion on whether a given statement is reasonable based on a comparison to data

Content for Kindergarten	Examples	Supportive Practices
A. Gather, organize and display data on a bar graph and/or pictograph	**The learner will:** ▪ Participate in classroom graphing activities by adding his/her input to a graph. ▪ Analyze the data on classroom graphs. ▪ Draw conclusions from the data, applying the data to future events/behaviors.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of graphing (creating a graph, adding data, and interpreting the data). ▪ Assist learners in "reading" the data, deducing information, drawing conclusions, and applying data to future events/behavior. ▪ Pose open-ended questions to engage learners in "reading" the data on a graph. ▪ Provide opportunities for learners to see graphs used in the real world. ▪ Encourage and support learners in explaining how they applied their skills during mathematical work. ▪ Provide opportunities for learners to explore and apply understanding of creating and interpreting a graph throughout the school day.
B. Analyze a chart or graph that displays data and make a prediction		
C. Answer questions based on data shown on graphs or charts		
D. Use data from graphs to answer questions and form opinions		

MATHEMATICS

2.7 Probability and Predictions

Third Grade Standards:

- Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes
- Design a fair and an unfair spinner
- List or graph the possible results of an experiment
- Analyze data using the concepts of largest, smallest, most often, least often and middle

Content for Kindergarten	Examples	Supportive Practices
A State and explain the likelihood of an event using the terms: likely, unlikely, or certain B. Compare sets of data using the concepts of largest, smallest, most, and least. Explain if an event is fair or unfair	**The learner will:** ▪ Determine the likelihood of real life events/things occurring. ▪ Discuss the fairness or unfairness of classroom situations. ▪ Predict the results of experiments.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of determining the likelihood of real life events/things occurring. ▪ Explain examples of activities that are most likely to occur at certain times of the year and explaining the meaning of the words likely, unlikely or certain. ▪ Model, using the appropriate language/vocabulary, the process of determining fairness or unfairness. ▪ Engage learners in discussions to determine fair and unfair procedures in and out of the classroom. ▪ Facilitate predictions of possible results by referring to previous events. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks.

MATHEMATICS

2.8 Algebra and Functions

Third Grade Standards:

- Recognize, describe, extend, create and replicate a variety of patterns including attribute, activity, number, and geometric patterns
- Use concrete objects and trial and error to solve number sentences and check if solutions are sensible and accurate
- Substitute a missing addend in a number sentence
- Create a story to match a given combination of symbols and numbers
- Use concrete objects and symbols to model the concepts of variables, expressions, equations, and inequalities
- Explain the meaning of solutions and symbols
- Use a table or chart to display information
- Describe and interpret the data shown in tables and charts
- Demonstrate simple function rules
- Analyze simple functions and relationships and locate points on a simple grid

Content for Kindergarten	Examples	Supportive Practices
A. Identify, describe, and extend patterns based on shape, size, color, sound, or number	**The learner will:** ▪ Sort manipulatives and other objects according to attribute (color, shape, size, function). Define sorting rule. ▪ Recognize, describe, and extend a pattern. ▪ Use manipulatives to create sets that are equal. ▪ Determine whether two sets of objects are equal by counting the objects in each set. ▪ Use concrete manipulatives and/or draw pictures to show the process of addition.	**The teacher will:** ▪ Provide a variety of materials for sorting, classifying, and creating patterns. ▪ Demonstrate and explain the concept of recognizing, describing, and extending a pattern. ▪ Provide opportunities and support learners in recognizing, describing, and extending patterns. ▪ Provide opportunities and support learners in recognizing and describing patterns in the environment. ▪ Model, using the appropriate language/vocabulary, the process of determining equal and not equal sets.
B. Use concrete objects to show equal or not equal		
C. Recreate a simple story problem using concrete objects or pictures		
D. Use concrete objects and trial and error to represent a number story		

MATHEMATICS

2.8 Algebra and Functions *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Use concrete objects or pictures to represent a number story that involves a missing addend F. Explain how solutions are determined G. Identify the purposes for different mathematical symbols (+, -, and =)	**The learner will:** ▪ Use concrete manipulatives and/or draw pictures to determine the missing addend (There were 3 bears at the table. Now there are 5. How many came?)/ ▪ Utilize a number line to "count on" from a specified number to reach an end number. ▪ Use numbers and symbols to represent adding and subtraction of concrete objects or pictures. ▪ Solve a simple story problem and explain the process. ▪ Draw story problems and assign the appropriate number to each set, then choose the correct symbol.	**The teacher will:** ▪ Support learners in determining whether sets are equal. ▪ Support learners using numbers as they draw pictures to illustrate story problems. ▪ Support learners in solving the missing addend(given an end number - "5" and a set number - "2", learners will "count on" from "2" to "5" to determine 3 is the missing amount). ▪ Provide opportunities and support learners in solving real life story problems. ▪ Provide opportunities and support learners in solving story problems with symbolic notation of numbers and adding/subtracting and equal sign. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks. ▪ Provide opportunities for learners to explore and apply understanding of the foundations for algebraic thinking throughout the school day.

MATHEMATICS

2.9 Geometry

Third Grade Standards:

- Name and label geometric shapes in two and three dimensions (e.g., circle/sphere, square/cube, triangle/pyramid, rectangle/prism)
- Building geometric shapes using concrete objects (e.g., manipulatives)
- Draw two and three dimensional geometric shapes and construct rectangles, squares, and triangles on the geoboard and on graph paper satisfying specific criteria
- Find and describe geometric figures in real life
- Identify and draw lines of symmetry in geometric figures
- Identify symmetry in nature
- Fold paper to demonstrate the reflections about a line
- Show relationships between and among figures using reflections
- Predict how shapes can be changed by combining or dividing them

Indicator	Examples	Supportive Practices
A. Identify common two and three-dimensional geometric shapes	**The learner will:** ▪ Explore the environment to locate two and three-dimensional shapes (circle, square, triangle, rectangle, cube, sphere, and cone). ▪ Name two-dimensional shapes in the environment and describe their properties. ▪ Create various geometric shapes with manipulatives (pattern blocks, geoboards, and tangrams). ▪ Determine if shapes folded in half are the same or different (symmetrical or nonsymmetrical). ▪ Observe items from nature to determine if they are symmetrical or nonsymmetrical.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of recognizing, describing the properties, and naming geometric shapes. ▪ Provide opportunities and support learners in locating geometric shapes within the environment. ▪ Provide materials/opportunities and support learners in creating shapes. ▪ Provide opportunities and support learners in describing the attributes of shapes.
B. Create and reproduce geometric designs using concrete objects		
C. Draw and/or construct two-dimensional geometric shapes		

MATHEMATICS

2.9 Geometry *(continued)*

Indicator	Examples	Supportive Practices
D. Name and describe two-dimensional geometric shapes in real life	**The learner will:** ▪ Explore the concept of reflection and symmetry. ▪ Explore geometric shapes turned in different ways.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of determining whether something is symmetrical. ▪ Provide opportunities and support learners in determining whether a shape or object is symmetrical. ▪ Support learners in making observations about the symmetry found in nature. ▪ Model, using the appropriate language/vocabulary, the process of determining whether something is a reflection. ▪ Model, using the appropriate language/vocabulary, how a shape can be turned in different ways and remains the same shape. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks. ▪ Provide opportunities for learners to explore and apply understanding of geometry throughout the school day.
E. Explore symmetry in nature (leaves, butterflies)		
F. Identify a reflection		
G. Create a reflection		
H. Identify geometric shapes that are turned in different ways		

MATHEMATICS

2.10 Trigonometry

Third Grade Standards:

- Identify right angles in the environment
- Model right angles and right triangles using concrete objects

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Identify triangles in the environment and discuss how they are alike and different	▪ Identify triangles in everyday situations. ▪ Identify and describe similarities and differences in triangles found in everyday situations and teacher created learning materials.	▪ Model, using the appropriate language/vocabulary, the process of comparing the attributes of triangles. ▪ Provide opportunities and support learners in identifying triangles in the environment. ▪ Provide opportunities and support learners in comparing the attributes of triangles. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks. ▪ Provide opportunities for learners to explore and apply understanding of triangles throughout the school day.

MATHEMATICS

2.11 Calculus

Third Grade Standards:

- Identify whole number quantities and measurements from least to most and greatest value.
- Identify least and greatest values represented in bar graphs and pictographs.
- Categorize rates of change as faster and slower.
- Continue a pattern of numbers or objects that could be extended infinitely.

Content for Kindergarten	Examples	Supportive Practices
A. Order whole numbers (0-20) from least to greatest value B. Identify faster and slower situations that occur in real life	**The learner will:** ▪ Place number cards in order from 0 to 20. ▪ Visualize and think about two objects (such as a bike and a car) and compare their rates of speed.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the process of ordering numbers from least to greatest. ▪ Use classroom tools such as the number line, or the 100s board, to model strategies that support learning. ▪ Provide opportunities and support learners in ordering numbers from least to greatest. ▪ Model, using the appropriate language/vocabulary, the process of deciding which real life event or object is faster and slower. ▪ Provide opportunities and support learners in deciding which real life object or event is faster or slower. ▪ Encourage and support learners in explaining how they applied their skills during mathematical tasks. ▪ Provide opportunities for learners to explore and apply understanding of ordering (from least to greatest, and from slow to fast).

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Personal Social

Pennsylvania's Kindergarten Standards

Kindergarten children's social and emotional development is strengthened when they have classroom experiences that promote a sense of autonomy, competence and belonging within an engaging and responsive environment. Teachers support children's self identity and social competence by modeling respectful interactions and using positive guidance techniques that scaffold the development of self control and problem solving. By encouraging positive approaches to learning teachers allow children to plan and make choices so that school becomes meaningful to them and they become engaged in life long learning.

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PERSONAL SOCIAL

3.1 Develop Self-Concept

Content for Kindergarten	Examples	Supportive Practices
A. Is aware of self and one's own preferences	**The learner will:** ▪ Verbalize ones own needs, likes, and dislikes. ▪ Choose activities, select materials, and carry out tasks. ▪ Persist in self-care activities (fastening jacket, tying shoes). ▪ Express ones own opinion, or ideas about a particular topic. ▪ Work independently for a short time. ▪ Adapt to other new adults in the school setting. ▪ Initiate the sharing of work and accomplishments with peers and adults at the appropriate times.	**The teacher will:** ▪ Provide a caring, nurturing, and accepting environment for learners. ▪ Create an emotional bond with learners. ▪ Refer to learners by their names. ▪ Make a personal connection with each learner. ▪ Display children's artwork at their eye level. ▪ Provide, encourage, and support opportunities for autonomy and self-direction (centers, job chart). ▪ Provide, encourage, and support opportunities for conversations between learners and with the teacher. ▪ Provide, encourage, and support opportunities for learners to want to try something new. ▪ Provide encouragement and praise for learners' efforts. ▪ Create a risk free environment that fosters decision-making, autonomy, self-direction, and independence.
B. Show independence in a wide range of activities		
C. Know and state independent thoughts and feelings		
D. Attempt new experiences with confidence and independence		
E. Show pride in accomplishments		

PERSONAL SOCIAL

3.2 Develop Self-Regulation

Content for Kindergarten	Examples	Supportive Practices
A. Recognize and label feelings B. Express feelings, needs, opinions, and wants that are appropriate to the situations C. Understand consequences of own behavior D. Follow rules and routines in classrooms and other settings E. Use materials with purpose, safety, and respect F. Pay attention as required by the task G. Make transitions between activities H. Follow adult directions I. Able to delay personal gratification until appropriate time	**The learner will:** ▪ Name a range of feelings (happy, sad, angry, surprised). ▪ Express in different ways how he/she feels. ▪ Separate feelings from actions. ▪ Control impulsive behavior when frustrated, angry, or excited. ▪ Persist in and completing student initiated and/or teacher directed tasks. ▪ Maintain composure when not selected (to answer question, be first in line, play game, etc). ▪ Use words instead of physical actions when upset. ▪ Move from one activity to another appropriately. ▪ Respond to teacher requests or ask clarifying questions about the request. ▪ Understand the logical consequences of one's actions.	**The teacher will:** ▪ Use non-verbal and verbal interactions that are congruent with feelings. ▪ Model genuine, appropriate emotional responses. ▪ Encourage expression of feelings, and supporting learners in managing those feelings. ▪ Respond to learners' non-verbal and verbal cues. ▪ Promote logical consequences and implement guidance practices that support learner self-control. ▪ Provide activities that support self-control (stop-start games, block play). ▪ Cue learners so they can bring their work to an end prior to transitioning. ▪ Give specific directions with reasonable expectations. ▪ Provide opportunities for learners to express their feelings through play, writing, and/or other artistic representations. ▪ Model and coach the learner in negotiating conflicts with others.

PERSONAL SOCIAL

3.3 Develop Social Interactions

Content for Kindergarten	Examples	Supportive Practices
A. Is aware of self and one's own preferences	**The learner will:** ▪ Be able to adapt to new adults in the school setting. ▪ Ask for help when needed. ▪ Seek out companionship with other children. ▪ Begin to negotiate conflicts. ▪ Re-establish a relationship with others after a conflict. ▪ Use multiple strategies for getting what he/she needs. ▪ Work with other children for at least 15 minutes. ▪ Take turns and wait for a turn. ▪ Be aware and sensitive of the wants and needs of others. ▪ Give a compliment. ▪ Use please and/or thank you appropriately.	**The teacher will:** ▪ Create responsive adult/child relationships. ▪ Use eye contact and body proximity to support learners. ▪ Provide consistency and predictability in daily routines, environment, and staff. ▪ Arrange the environment so there is space for learners to work together. ▪ Be available to assist and facilitate learners in solving their own conflicts rather than removing a learner and/or the material. ▪ Provide ample materials to support group work and play. ▪ Provide opportunities and encourage group work and play. ▪ Model nurturing behaviors by acts of kindness and helpfulness to other adults and children. ▪ Use classroom management strategies and techniques that promote positive behaviors. ▪ Provide opportunities to role play and practice new social skills.
B. Know and state independent thoughts and feelings		
C. Trust familiar adults and close peers		
D. Enter into and initiate play with peers		
E. Enjoy playing or working with a variety of children in a number of activities		
F. Respond with empathy to children who are upset or in need		
G. Seek help from peers and adults when needed		
H. Respect the feelings, rights, and belongings of others		
I. Cooperate in small and large groups activities.		
J. Work or play cooperatively with peers for a sustained time		
K. Take turns in games and tasks		
L. Share materials when appropriate		
M. Show increasing abilities to resolve conflicts with peers		
N. Shows nurturing behaviors through helpfulness to others		

PERSONAL SOCIAL

3.4 Develop Care and Self-Reliance

Content for Kindergarten	Examples	Supportive Practices
A. Choose materials and activities independently	**The learner will:** ▪ Select from activities in the classroom. ▪ Return materials to the shelves when finished. ▪ Go to the bathroom independently when he/she has to go or ask for permission to leave the classroom and go to a bathroom outside the classroom. ▪ Stay within safe boundaries and follow school safety rules. ▪ Speak to an adult when he/she thinks something is not safe. ▪ Keep track of personal belongings (book-bag, coat, gloves).	**The teacher will:** ▪ Organize the materials so children can access and return them. ▪ Give support and nurturance when needed but encourage learners to assume responsibility for self-care behaviors. ▪ Provide a safe environment that encourages active learning.

Reading, Writing, Speaking, and Listening

Instruction in kindergarten is focused on developing foundational skills that prepare students for later learning in the language arts. Language and literacy development encompasses reading, writing, speaking, and listening. In this foundational year, kindergarten teachers embed language and literacy learning into the daily activities of the classroom. In kindergarten, the exposure to different types of print and their uses serve as the basis upon which children develop/strengthen their knowledge of letter shapes, names, sounds, and words. A comprehensive literacy program builds upon this basis and incorporates reading, writing, speaking, and listening.

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READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently

Third Grade Standards:

- Identify the purposes and types of text (e.g., literary, informational) before reading
- Preview the text formats (e.g., title, headings, chapters, and table of contents)
- Use knowledge of phonics, word analysis (e.g., root words, prefixes and suffixes), syllabication, picture and context clues to decode and understand new words during reading.
- Read text using self-monitoring comprehension strategies (e.g., predict, revise predictions, reread, use headings, use organization of text, adjust reading rate)
- Acquire a reading vocabulary by identifying and correctly using words, (e.g., antonyms, synonyms, categories or words). Use a dictionary when appropriate
- Understand the meaning of and use correctly new vocabulary learned in various subject areas
- Demonstrate after reading understanding and interpretation of both fiction and nonfiction text
- Retell or summarize the major ideas, themes or procedures of the text
- Connect the new information or ideas in the text to know information
- Clarify ideas and understandings through rereading and discussion
- Make responsible assertions about the text by citing evidence from the text
- Demonstrate fluency and comprehension in reading
- Read familiar materials aloud with accuracy
- Self-correct mistakes
- Use appropriate rhythm, flow, meter, and pronunciation
- Read a variety of genres and types of text
- Demonstrate comprehension

Content for Kindergarten	Examples	Supportive Practices
A. Develop book/print knowledge and conventions (e.g., turn pages from left to right when reading, read words and sentences from left to right, read from top to bottom, return sweep, parts of a book [cover, title, author, illustrator, title page], print represents language)	**The learner will:** ▪ Hold a book correctly. ▪ Recognize the front and back of a book. ▪ Distinguish print from picture. ▪ Use illustrations and print to gain meaning. ▪ Demonstrate left to right page sequence.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, concepts of print using big books, messages, charts, letters, notes, and signs. ▪ Provide daily opportunities for learners to look at and read books, daily message, charts, posters and magazines.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
A. *(continued)* Develop book/print knowledge and conventions (e.g., turn pages from left to right when reading, read words and sentences from left to right, read from top to bottom, return sweep, parts of a book [cover, title, author, illustrator, title page], print represents language)	**The learner will:** ▪ Demonstrate top to bottom page orientation. ▪ Identify the title, title page, author, and illustrator. ▪ Identify and preview the cover of a book. ▪ Recognize and identify common signs, logos, labels, and classroom print. ▪ Demonstrate that text is read from left to right and top to bottom. ▪ Demonstrate return sweep. ▪ Demonstrate one-to-one correspondence. ▪ Distinguish a letter from a word. ▪ Differentiate words and spaces. ▪ Discriminate uppercase from lowercase letters. ▪ Differentiate first and last letter in a word and first and last word in a sentence. ▪ Locate punctuation including periods, question marks, exclamation points, commas, and quotation marks.	**The teacher will:** ▪ Provide a variety of opportunities for learners to demonstrate their knowledge of how print works. ▪ Read quality literature daily. ▪ Reread familiar/favorite books attending to concepts of print. ▪ Assist learners read classroom labels, signs and other environmental and classroom print. ▪ Develop charts with learners labeling the parts of a book and record directions for book use. ▪ Provide a learning center and classroom library where learners can independently practice using print conventions. ▪ Organize author/genre studies to encourage learners to become familiar with different authors, illustrators, and a variety of genres. ▪ Model, using the appropriate language/vocabulary, the uses of punctuation during shared reading, when reading aloud, and during shared and interactive writing.. ▪ Engage learners in playing games (finding first/last letters, punctuation marks, title,) with learners' names or classroom print. ▪ Provide opportunities for learners to explore and apply understanding of books and print knowledge throughout the school day.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Develop sentence awareness/word awareness	**The learner will:** ▪ Discriminate words in a sentence. ▪ Clap words in a sentence. ▪ Clap syllables in a word. ▪ Count and track parts in a word (syllables) and words in a sentence.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, clapping and counting syllables in learners' names, words, and sentences. ▪ Provide opportunities for learners to clap out syllables in meaningful words (e.g., words connected to a unit of study). ▪ Provide opportunities for learners to use manipulatives to count words in spoken sentences. ▪ Provide opportunities for learners to explore and apply understanding of sentence and word awareness throughout the school day.
C. Discriminate words and sounds	▪ Tell whether environmental sounds are the same or different. ▪ Tell whether speech sounds are the same or different. ▪ Identify and produce initial sounds in words. ▪ Sort and classify words by initial sound. ▪ Identify initial, final and medial sounds in words.	▪ Model, using the appropriate language/vocabulary, discriminating words and sounds. ▪ Provide opportunities for learners to listen to sounds in order to give a "thumbs up or down" when sounds are the same or different. ▪ Provide opportunities for learners to sort pictures and/or objects by beginning sounds. ▪ Model, using the appropriate language/vocabulary, "stretching" through words to hear each sound. ▪ Provide opportunities for learners to "stretch" through words to emphasize and identify initial, medial and final sounds in words.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Discriminate, identify, and produce rhyming words and alliteration	**The learner will:** ▪ Recognize and identify rhyming words. ▪ Identify and produce rhyming words. ▪ Identify and produce sentences with rhyming. ▪ Identify and produce words that begin with the same sound. ▪ Identify and produce sentences with alliteration.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, discriminating, identifying, and producing rhyming words and alliteration. ▪ Engage learners in producing and mimicking rhymes, songs and finger plays. ▪ Read books with examples of alliterative and rhyming language and identify rhyming words and words with similar sounds. ▪ Provide opportunities for learners to identify rhyming pairs by giving a "thumbs up." ▪ Use the cloze procedure to engage learners in completing a rhyme when reading a familiar poem/song or predictable book. ▪ Highlight the rhyme found in nursery rhymes, poems, and finger plays. ▪ Provide opportunities for learners as they "stretch" through words to emphasize and identify initial, medial and final sounds in words. ▪ Provide opportunities for learners to explore and apply understanding of rhyming and alliteration throughout the school day.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Segment phonemes to form words.	**The learner will:** ▪ Isolate initial consonant sounds in single-syllable words. ▪ Orally segment the onset and rime of single-syllable words. ▪ Segment individual phonemes in a single syllable word including CVC words and other two to four phoneme words. ▪ Substitute sounds to form new words. ▪ Count the phonemes heard in CVC words and other two to four phoneme words.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, segmenting phonemes (“ stretching” words into individual phonemes) in single syllable words. ▪ Provide opportunities for learners to use Elkonin boxes to segment a word into its phonemes. ▪ Engage learners in playful activities to practice manipulating letters within words to make new words.
F. Blend sounds to make a spoken word.	▪ Blend the onset and rime together to make a word. ▪ Blend two to four phonemes together to make a word.	▪ Model, using the appropriate language/vocabulary, blending phonemes together to make single syllable words. ▪ Provide opportunities for learners to blend phonemes together to make words. ▪ Provide opportunities for learners to explore and apply understanding of blending phonemes together throughout the school day.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
G. Develop knowledge of letters and their sounds (Alphabetic Principle)	**The learner will:** ▪ Identify letters in own name and names of classmates. ▪ Recognize and name letters of the alphabet (in sequence and random order) with automaticity. ▪ Identify and name upper and lower case letters in words with automatcity. ▪ Sort letters into groups according to their letter name, not the way they visually look. ▪ Match uppercase and lowercase letter pairs. ▪ Recognize and say the common sounds of letters. ▪ Write the letter for the phoneme at the beginning of a word.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the names of upper and lowercase letters. ▪ Model, using the appropriate language/vocabulary, the common sounds associated with each letter. ▪ Emphasize letter-sound relationships during large and small group shared reading experiences using big books, messages, charts, letters, poems, notes, signs and child-created texts. ▪ Display an alphabet chart in the classroom at learners' level. ▪ Provide opportunities for learners to use the alphabet chart as a strategy for reading and writing. ▪ Create and engage learners in using a name wall in the classroom. ▪ Create and engage learners in using a sight word wall in the classroom. ▪ Provide a variety of alphabet manipulatives (alphabet picture cards, magnetic letters,). ▪ Support learners as they write their name daily to sign-in for attendance.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
G *(continued)*. Develop knowledge of letters and their sounds (Alphabetic Principle)	**The learner will:**	**The teacher will:** ▪ Provide opportunities for learners to use letter cards to sort and match letters into lowercase and uppercase groups. ▪ Provide opportunities for learners to use letter and picture cards to create sound-symbol matches. ▪ Engage learners in singing songs that emphasize letter sounds. ▪ Provide multiple opportunities for learners to write daily for a variety of purposes. ▪ Provide opportunities for learners to explore and apply understanding of the alphabetic principle.
H. Decode words (phonics)	▪ Identify letters and corresponding sounds. ▪ Apply knowledge of sounds and letters when reading. ▪ Read/write phonetically.	▪ Model, using the appropriate language/vocabulary, applying the sounds of letters to the decoding process. ▪ Provide opportunities for learners to apply the sounds of letters to the decoding process (shared reading, small group differentiated reading instruction, and independent reading). ▪ Provide opportunities for learners to explore and apply knowledge of letter/sound correspondence to decode print at learning centers.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
I. Encode words (phonics)	**The learner will:** ▪ Identify letters and corresponding sounds. ▪ Apply knowledge of sounds and letters when writing.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, applying the sounds of letters to the encoding process. ▪ Provide opportunities for learners to apply the knowledge of the sounds of letters to the encoding process during shared/interactive writing, independent writing time, and at learning centers.
J. Read emergently with adequate fluency	▪ Recite nursery rhymes, poems, and finger plays, with fluency (appropriate rate and espression). ▪ Listen to models of fluent reading. ▪ Read from familiar texts with fluency (rate, accuracy, and expression). ▪ Use understanding of end punctuation to "read like you're talking." ▪ Begin to recognize common sight words with automaticity.	▪ Model, using the appropriate language/vocabulary, reading with fluency. ▪ Expose learners to repeated readings of big books, daily message, poems, charts, songs, finger plays. ▪ Encourage students to "read along" during shared reading. ▪ Provide opportunities for learners to practice reading with fluency (rereading familiar texts independently). ▪ Provide opportunities for learners to explore and apply understanding of reading with fluency during learning centers.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
K. Name and describe new concepts	▪ Name, describe, and talk about new concepts. ▪ Request further information about a concept by using the correct name, label, or vocabulary word. ▪ Engage in conversations, with a variety of partners, using the key vocabulary words. ▪ Define a word, using descriptive words, use synonyms and/or antonyms.	▪ Model rich spoken language (vocabulary and sentence structure). ▪ Provide opportunities for learners to make meaningful connections to concept being taught. ▪ Provide explicit instruction of key vocabulary words. ▪ Provide artifacts and/or pictures, relevant to the concept being taught. ▪ Read aloud from a variety of picture books about the concept, highlighting concept words during the explicit follow-up conversations. ▪ Discuss synonyms and antonyms for new words. ▪ Provide opportunities for classroom discussions about the topic of study. Encourage learners to use new vocabulary words. ▪ Provide opportunities for learners to explore and apply new concepts and vocabulary during learning centers (picture lotto games, card sorts).

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
L. Acquire a reading vocabulary consisting of common words (environmental print, sight words, word families)	▪ Identify designated words in print in a variety of texts (word walls, message, poems, labels in the room).	▪ Model, using the appropriate language/vocabulary, the importance of recognizing sight words with automaticity. ▪ Create a word wall of sight words. ▪ Provide opportunities for learners to read and identify common reading words within a variety of texts. ▪ Provide opportunities for learners to explore and apply new sight words during shared reading, small group differentiated reading instruction, independent reading and learning centers.
M. Listen to new vocabulary in multiple contexts in order to understand new words and concepts	▪ Respond appropriately to books, stories, conversations, with words**,** and gestures. ▪ Listen to stories on tapes, computer, discussions.	▪ Model rich spoken language (vocabulary and sentence structure). ▪ Provide exposure to new vocabulary in various contexts (read alouds, class discussions, spoken language of teacher, listening activities, computers).

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
N. Discuss unknown words and word meanings	**The learner will:** ▪ Respond appropriately to books, stories, conversations, with words, and gestures. ▪ Use new vocabulary in the context of dramatic play, daily routines, and classroom conversations. ▪ Use the new vocabulary to ask questions to extend learning.	**The teacher will:** ▪ Model rich spoken language (vocabulary and sentence structure). ▪ Engage students in conversations about picture books through the use of open-ended questions. ▪ Provide opportunities and support to learners as they talk to various partners. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) during classroom conversations.
O. Use an increasingly complex and varied spoken vocabulary	▪ Demonstrate a rich spoken vocabulary in conversations across interest/content areas. ▪ Use personal pronouns in conversations. ▪ Use past, present, and future tense to describe events.	▪ Model rich spoken language (vocabulary and sentence structure). ▪ Model different verb tenses throughout the school day. ▪ Engage students in conversations about picture books through the use of open-ended questions. ▪ Provide opportunities and support to learners as they talk to various partners. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) during classroom conversations. ▪ Expand on what children say by questioning, adding information, explanations, and descriptions.

READING, WRITING, SPEAKING AND LISTENING

1.1 Learning to Read Independently *(continued)*

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
P. Demonstrate an increasing understanding of new vocabulary introduced in conversations, activities, stories or books	▪ Participate in games such as "Simon Says" and demonstrate commands such as jump, skip, touch, clap and point. ▪ Use expressive language that includes new vocabulary, pronouns, descriptive words, and complex sentence structures.	▪ Model rich spoken language (vocabulary and sentence structure). ▪ Provide opportunities and support to learners as they talk to various partners. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) during classroom conversations. ▪ Expand on what children say by questioning, adding information, explanations, and descriptions. ▪ Utilize games that require the learner to listen and to respond to commands.
Q. Demonstrate the understanding that communication occurs in different ways including the use of various languages, devices, and gestures	▪ Follow classroom routines (sign-in, putting backpack in appropriate place, placing homework in basket, selecting snack and lunch items). Match movements and actions to music and directions in songs, poems and finger plays.	▪ Design meaningful procedural classroom charts (sign-in, snack, center activities). ▪ Engage learners in reciting poems and finger plays, and singing songs that have accompanying movements/gestures.

READING, WRITING, SPEAKING AND LISTENING

1.2 Reading Critically in all Content Areas

Third Grade Standards:

- Read and understand essential content of informational texts and documents in all academic areas
- Differentiate fact from opinion within text
- Distinguish between essential and nonessential information within a text
- Make inferences from text when studying a topic (e.g., science, social studies) and draw conclusions based on text
- Analyze text organization and content to derive meaning from text using established criteria
- Use and understand a variety of media and evaluate the quality of material produced
- Use electronic media for research
- Identify techniques used in television and use the knowledge to distinguish between facts and misleading information
- Assess the quality of media projects (e.g., script, play, audiotape) that have been developed for a targeted audience
- Produce work in at least one literary genre that follows the conventions of the genre

Content for Kindergarten	Examples	Supportive Practices
A. Determine important ideas and messages in informational texts	**The learner will:** ▪ Retell important facts from the text. ▪ Identify the main idea/message of the text. ▪ Identify how someone might use the text. ▪ Complete, with teacher assistance, KWL charts before, during, and after reading, listening, or viewing informational selections.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, identifying important ideas and messages in informational texts. ▪ Include informational texts as part of read alouds, shared reading, small group differentiated reading instruction, and independent reading. ▪ Provide opportunities for learners to make meaning from, and identify important ideas and messages in, informational texts.

READING, WRITING, SPEAKING AND LISTENING

1.2 Reading Critically in all Content Areas *(continued)*

Content for Kindergarten	Examples	Supportive Practices
A *(continued)***.** Determine important ideas and messages in informational texts	**The learner will:** ▪ Discuss concepts and information in texts in small groups and with a partner. ▪ Connect text events and information to real life experiences and prior knowledge. ▪ Demonstrate understanding of informational text through response activities such as drawing, writing, generating questions and/or answering questions. Demonstrate an understanding of informational text by using them for real life purposes (prepare a recipe, make a picture).	**The teacher will:** ▪ Engage learners in completing graphic organizers (Venn diagrams, KWL charts, concept maps,) to summarize the main ideas or important facts from informational texts. ▪ Engage learners in conversations about the big ideas and concepts in reading selections. ▪ Engage learners in conversations about the author's purpose for writing the text. ▪ Provide a variety of ways for children to respond to and demonstrate understanding of texts. ▪ Include informational texts in the classroom library.
B. Recognize the characteristics of various types of texts	▪ Distinguish between different forms of texts and the functions they serve. ▪ Distinguish fiction from nonfiction.	▪ Model, using the appropriate language/vocabulary, the important features and their purpose in informational text. ▪ Provide a variety of texts in the classroom library (fiction and nonfiction trade books, plays, poems, dictionaries, magazines, newspaper). ▪ Provide and use a variety of functional documents with simple oral, written, or rebus directions and/or labels (classroom schedules, recipes, rules, signs, posters, maps).

READING, WRITING, SPEAKING AND LISTENING

1.2 Reading Critically in all Content Areas *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B *(continued).* Recognize the characteristics of various types of texts	**The learner will:**	**The teacher will:** ▪ Provide a nonfiction library in the classroom that will compliment theme studies and children's interests. ▪ Engage learners in discussions to compare fiction and nonfiction texts.
C. Identify features of informational texts and use them to make meaning	▪ Identify how text features help us to find information – (title, table of contents, headings and subheadings, bold print, charts, diagrams, photographs, captions, labels, organization of text)	▪ Model, using the appropriate language/vocabulary, how to read informational text; how to use text features to aid in understanding. ▪ Provide opportunities for learners to use text features in informational text to make meaning during read alouds, shared reading, and small group differentiated reading instruction

READING, WRITING, SPEAKING AND LISTENING

1.3 Reading, Analyzing, and Interpreting Literature

Third Grade Standards:

- Read and understand works of literature
- Identify literary elements in stories describing characters, setting, and plot
- Identify literary devices in stories (e.g., rhyme, rhythm, personification)
- Identify the structures in poetry (e.g., pattern books, predictable books, nursery rhymes)
- Identify the structures in drama (e.g., dialogue, story enactment, acts, scenes)
- Read and respond to nonfiction and fiction including poetry and drama

Content for Kindergarten	Examples	Supportive Practices
A. Understand and respond to a variety of literary selections that are read, listened to or viewed	**The learner will:** ▪ View, listen to, share, discuss, and begin to read grade level appropriate selections. ▪ Connect personal experiences with the experiences, language, customs, and culture of literary characters. ▪ Demonstrate understanding of stories through different response modes, including talk, drawing, writing, drama, and dramatic play.	**The teacher will:** ▪ Provide many opportunities for learners to read, listen to, view, share, and discuss texts from a variety of genres and types - stories, poems, nursery rhymes, songs, plays, raps, finger plays. ▪ Provide opportunities for learners to listen to and discuss a variety of texts representing diverse cultures and ethnicities. ▪ Provide ideas and discussions that help learners make connections between what they read and their own life. ▪ Guide children in establishing purposes for listening, reading, or viewing.

READING, WRITING, SPEAKING AND LISTENING

1.3 Reading, Analyzing, and Interpreting Literature *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Monitor comprehension while viewing, listening to and reading literary selections	**The learner will:** ▪ Preview books by taking "picture walks" and making predictions about texts. ▪ Use prior knowledge to anticipate meaning and make sense of texts. ▪ Assess and revise predictions while reading. ▪ Self-correct word recognition errors during reading. ▪ Ask oneself if what is being read "makes sense."	**The teacher will:** ▪ Model the importance of making meaning and to be aware when comprehension breaks down. ▪ Model, using the appropriate language/vocabulary, how to monitor understanding while reading. ▪ Explicitly model comprehension strategies (making connections, visualizing, predicting and checking predictions, questioning) during interactive read alouds. ▪ Provide opportunities for learners to use comprehension strategies during shared reading and small group differentiated reading instruction.

READING, WRITING, SPEAKING AND LISTENING

1.4 Types of Writing

Third Grade Standards:

- Write narrative pieces (e.g., stories, poems and plays)
- Include detailed descriptions of people, places, things
- Use relevant illustrations
- Include literary elements
- Write informational pieces (e.g., descriptions, letters, reports, and instructions) using illustrations when relevant
- Write an opinion and support it with facts

Content for Kindergarten	Examples	Supportive Practices
A. Describe the role of people, places, and things in a story	**The learner will:** ▪ Use pictures and drawings to represent ideas. ▪ Participate in group interactive and shared writing experiences. ▪ Include the main idea and details in oral descriptions and drawings.	**The teacher will:** ▪ Provide opportunities throughout the school day for learners to engage in shared and interactive writing. ▪ Model, using the appropriate language/vocabulary, the writing process including pre-writing strategies, the various ways ideas can be recorded, revising, editing and publishing. ▪ Model, using the appropriate language/vocabulary, how to choose characters, setting and plot for a story. ▪ Model, using the appropriate language/vocabulary, the basic writing conventions (holding the writing tool, writing left to right and top to bottom, leaving spaces between words.) ▪ Provide opportunities for children to dictate or write narrative pieces from personal experiences. ▪ Provide opportunities for learners to write throughout the school day. ▪ Provide a variety of writing tools.

READING, WRITING, SPEAKING AND LISTENING

1.4 Types of Writing *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Include simple plot when sharing information	**The learner will:** ▪ Tell a story in the correct sequence.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the use of graphic organizers to help learners organize the story line in sequential order.
C. Identify illustrations that depict story content	▪ Select appropriate illustrations to accompany the story. ▪ Include illustrations depicting the story content as well as characters and setting of the story.	▪ Model, using the appropriate language/vocabulary, the use of illustration to understand a story.
D. Draw or write informational sentences (letters, descriptions, definitions, collections of facts, simple instructions) using illustrations when relevant	▪ Make lists, record facts, write letters, create descriptions, and/or draw pictures to share important information about a topic.	▪ Read aloud from a variety of genres. ▪ Model using the appropriate language/vocabulary, the use of writing as a form of daily communication. ▪ Model using the appropriate language/vocabulary, the 'how tos' of reading informational text (visual and text features). ▪ Provide opportunities and support to learners as they read informational texts (shared reading, small group differentiated reading instruction, independent reading). ▪ Provide opportunities for children to explore topics of personal relevance. Model, using the appropriate language/vocabulary, the 'how tos' of writing informational text.

READING, WRITING, SPEAKING AND LISTENING

1.4 Types of Writing *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Differentiate between fact and opinion	**The learner will:** ▪ Use illustrations to represent the facts. ▪ Share facts during group discussions. ▪ Share opinions during group discussions. ▪ Differentiate their opinions from facts during group discussions.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the difference between a fact and an opinion. ▪ Provide opportunities for learners to differentiate between fact and opinion. ▪ Use graphic organizers during discussions to help differentiate between fact and opinion (T-chart). ▪ Model, using the appropriate language/vocabulary, what writers do when working with fact versus opinion (science logs and recording of the news, versus editorials and persuasive writing). Should say: Model how writers use fact versus opinions.

READING, WRITING, SPEAKING AND LISTENING

1.5 Quality of Writing

Third Grade Standards:

- Write with a sharp, distinct focus identifying topic, task, and audience
- Write using well-developed content appropriate for the topic
- Gather and organize information
- Write a series of related sentences or paragraphs with one central idea
- Incorporate details relevant and appropriate to the topic
- Write with controlled and/or subtle organization
- Sustain a logical order
- Include a recognizable beginning, middle, and end
- Write with an awareness of the stylistic aspects of composition
- Use sentences of differing lengths and complexities
- Use descriptive words and action verbs
- Revise writing to improve detail and order by identifying missing information and determining whether ideas follow logically
- Edit writing using the conventions of language
- Spell common, frequently used words correctly
- Use capital letters correctly (first word in sentences, proper nouns, pronoun "I")
- Punctuate correctly (period, exclamation point, question mark, commas in a series)
- Use nouns, pronouns, verbs, adjectives, adverbs, and conjunctions properly
- Use complete sentences (simple, compound, declarative, interrogative, exclamatory, and imperative)
- Present and/or defend written work for publication when appropriate

Content for Kindergarten	Examples	Supportive Practices
A. Create a focus for the 'piece' of writing.	**The learner will:** ▪ Sort pictures, word cards, or objects that relate to a specific topic.	**The teacher will:** ▪ Provide opportunities throughout the school day for learners to engage in shared and interactive writing. Provide opportunities for learners to write throughout the school day.

READING, WRITING, SPEAKING AND LISTENING

1.5 Quality of Writing *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Retell about specific experiences, people, objects, events, or stories with a focused topic	**The learner will:** ▪ Retell a story using picture cards.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the 'how tos; of creating a topic for one's 'piece.' ▪ Engage learners in thinking about their 'piece' and then sharing it with a classmate prior to writing. ▪ Provide learners with opportunities to sequence events or pictures. ▪ Provide learners with many opportunities to speak throughout the school day to develop the foundational skills necessary to be a writer. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure). ▪ Encourage learners to stretch out the sounds in words when writing.
C. Use appropriate content for the topic	▪ Brainstorm ideas to use for the topic. ▪ Brainstorm detail/additional information to support the topic. ▪ Compose sentences through dictation, pictures, and/or words with one central topic. ▪ Incorporate relevant information.	▪ Model, using the appropriate language/vocabulary, prewriting strategies (selecting a topic, gathering information). ▪ Provide opportunities for learners to brainstorm ideas for the topic. ▪ Support learners as they stretch out the sounds in words when writing.

READING, WRITING, SPEAKING AND LISTENING

1.5 Quality of Writing *(continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Organize words into a complete thought	**The learner will:** ▪ Arrange ideas in a logical order. ▪ Include a beginning, middle, and end when telling a story. ▪ Complete an idea to include the subject and verb.	**The teacher will:** ▪ Model rich spoken language (vocabulary and sentence structure). ▪ Provide learners with many opportunities to speak throughout the school day to develop the foundational skills necessary to be a writer. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) during classroom conversations. ▪ Provide opportunities to sequence events or pictures. Support learners in forming a complete sentence.
E. Use a variety of pictures or words to express a thought	▪ Use a variety of pictures, dictations, or words to make a complete thought. ▪ Use descriptive words and verbs.	▪ Model rich spoken language (vocabulary and sentence structure). ▪ Provide learners with many opportunities to speak throughout the school day to develop the foundational skills necessary to be a writer. ▪ Encourage learners to expand their use of language (vocabulary and sentence structure) during classroom conversations. ▪ Point out rich vocabulary, interesting uses of language, and other features of read alouds that give the text a distinctive “voice” and style. ▪ Model how to give a piece of writing a distinctive “voice’ and /or style.

READING, WRITING, SPEAKING AND LISTENING

1.5 Quality of Writing *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E *(continued).* Use a variety of pictures or words to express a thought	**The learner will:**	**The teacher will:** ▪ Provide opportunities to describe objects and pictures (show and tell,) ▪ Provide various classroom resources around the room (labels, word walls, charts, word splashes). ▪ Brainstorm and list various ways to start a sentence.
F. Revise writing or illustrations to sequence events and add detail	▪ Reread sentences or story to oneself, a classmate, and/or an adult. ▪ Add words or pictures to include more detail.	▪ Model, using the appropriate language/vocabulary, the process of revising a 'piece'. ▪ Support learners as they reread and think about their 'piece.' ▪ Support learners as they add words (descriptive, details) or pictures to their 'piece'. ▪ Share student work that exhibits sequence, details, and/or descriptive language.
G. Publish or present writing	▪ Read finished work to the class or a small group. ▪ Take pride in authoring a page of a class book. ▪ Arrange the finished work into an individual book.	▪ Provide opportunities for learners to share their writing with others. ▪ Display examples of writing in the classroom or hallway. ▪ Add learners' work to a class book. ▪ Help each learner publish his/her work into an individual book.

READING, WRITING, SPEAKING AND LISTENING

1.6 Speaking and Listening

Third Grade Standards:

- Listen to others
- Ask questions as an aid to understanding
- Distinguish fact from opinion
- Listen to a selection of literature (fiction and/or nonfiction)
- Relate it to similar experiences
- Predict what will happen next
- Retell a story in chronological order
- Recognize character and tone
- Identify and define new words and concepts
- Speak using skills appropriate to formal speech situations
- Use appropriate volume
- Pronounce most words accurately
- Demonstrate an awareness of audience
- Contribute to discussions
- Ask relevant questions and respond with appropriate information or opinions to questions asked
- Listen to and acknowledge the contributions of others
- Display appropriate turn-taking behaviors
- Participate in small and large group discussions and presentations
- Participate in everyday conversations
- Present oral readings, short reports, and interviews
- Give simple directions, explanations, and reporting of an emergency
- Use media for learning purposes

Content for Kindergarten	Examples	Supportive Practices
A. Listen responsively to directions, stories and conversations	**The learner will:** ▪ Respond by demonstrating appropriate listening behaviors such as: eyes on speaker and facing speaker.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, the behaviors of being a good listener (eye contact, turn taking, quiet body).

READING, WRITING, SPEAKING AND LISTENING

1.6 Speaking and Listening *(continued)*

Content for Kindergarten	Examples	Supportive Practices
A *(continued)* Listen responsively to directions, stories and conversations	**The learner will:** ▪ Respond appropriately to books and stories with facial and body gestures (smiling and laughter). ▪ Wait his/her turn to speak ▪ Follow two-step and three-step directions.	**The teacher will:** ▪ Provide oral language experiences through beginning exercises, open-ended questions, and think-pair-share experiences. ▪ Read various genres and engage learners in conversations about the story/text.
B. Student will recite rhymes, songs and familiar text	▪ Verbally recite poems and finger plays with peers. ▪ Sing songs and use musical instruments.	▪ Lead choral readings. ▪ Use a poem of the week to develop fluency. ▪ Build a class repertoire of familiar songs and finger plays.
C. Speak clearly enough to be understood by most listeners	▪ Articulate most speech sounds correctly. ▪ Keep hands away from his/her mouth when speaking. ▪ Speak in a voice loud enough for the audience to hear. ▪ Look at the audience when speaking.	▪ Model, using the appropriate language/vocabulary, the behaviors of speaking in a clear voice. ▪ Provide learners with many opportunities to speak throughout the school day (beginning exercises, opening circle, snack,). ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) and confidence at speaking during group discussions and in front of others (beginning exercises, opening circle, snack, show and tell, weekly news,).

READING, WRITING, SPEAKING AND LISTENING

1.6 Speaking and Listening *(continued)*

Content for Kindergarten	Examples	Supportive Practices
D. Modulate voice volume and intonation	**The learner will:** ▪ Act out character roles with appropriate expression (mean, happy, sad, kind voice). ▪ Demonstrate the use of punctuation in sentence structure by using voice intonation appropriately. ▪ Use laughter and higher pitch when telling a joke. ▪ Demonstrate the use of "inside and outside voice". ▪ Modulate voice to express opinions and feelings.	**The teacher will:** ▪ Model, using the appropriate language/vocabulary, modulating one's voice volume and intonation. ▪ Model, using the appropriate language/vocabulary, the behaviors of reading and speaking with intonation reflective of end punctuation marks. ▪ Provide opportunities and support to learners as they read and reread stories, poems, finger plays, songs, and/or informational text for fluency during shared reading and differentiated reading instruction.
E. Ask and answer relevant questions and share experiences individually and in groups	▪ Verbalize personal experiences in an appropriate sequential manner. ▪ Engage in conversations about favorite books, characters and events. ▪ Ask questions related to fiction and non-fiction books. ▪ Ask relevant questions during classroom conversations. ▪ Talk about stories before writing.	▪ Model, using the appropriate language/vocabulary, the behaviors of thinking and reflecting in order to ask relevant questions. ▪ Provide opportunities and support to learners as they engage in metacognitive thinking.

READING, WRITING, SPEAKING AND LISTENING

1.6 Speaking and Listening *(continued)*

Content for Kindergarten	Examples	Supportive Practices
F. Initiate and respond appropriately to conversations and discussions	**The learner will:** ▪ Initiate appropriate conversations with adults and peers. ▪ Participate appropriately (questions and answers tied to the topic of conversation) in conversations with adults and peers.	**The teacher will:** ▪ Model rich spoken language (vocabulary and sentence structure) during classroom conversations. ▪ Encourage and support learners as they expand their use of language (vocabulary and sentence structure) and confidence at speaking during group discussions and in front of others. ▪ Provide opportunities and support learners as they engage in teacher planned and learner initiated spontaneous conversations throughout the school day.

READING, WRITING, SPEAKING AND LISTENING

1.7 Research

Third Grade Standards:

- Select a topic for research
- Locate information using appropriate sources and strategies
- Locate resources for a particular task (, newspapers, dictionary)

Content for Kindergarten	Examples	Supportive Practices
A. Choose a topic of interest to research/talk about/share with classmates	**The learner will:** ▪ Use classroom library to investigate, explore, and research a topic of interest. ▪ Record information in written or picture form.	**The teacher will:** ▪ Create classroom literacy materials to engage and stimulate children's interests. ▪ Provide opportunities for learners to share topics of interest. ▪ Provide opportunities for learners to research topics.
B. Demonstrate increasing understanding that technology can be used to gain information	▪ Use appropriate interactive software programs. ▪ Identify basic computer parts (monitor, keyboard, mouse).	▪ Support children's interaction with a variety of communication 'tools' (dictionaries, translators, communication devices, computer). ▪ Select software and Internet web sites to support learners' research. ▪ Select software that matches learners' skill levels. ▪ Select software that represents both fiction and non-fiction literacy.
C. Recognize the different parts of informational text that are used to locate information (table of contents, index, glossary)	▪ Use classroom library to investigate, explore, and research a topic of interest. ▪ Use different parts of informational text to aid in the gathering of information.	▪ Create classroom literacy materials to engage and stimulate children's interests. ▪ Provide opportunities and support to learners as they use different parts of informational text to aid in the gathering of information.

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Science

Pennsylvania's Kindergarten Standards

Kindergarteners learn about scientific concepts through the active exploration, observation and investigation of materials and ideas. These experiences provide the foundation for abstract and scientific thought. Students who are given opportunities to conduct experiments, gather data and make conclusions are developing skills that support discovery about the natural world, the scientific process and principles and technology.

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Science

Science and Technology

Pennsylvania's Kindergarten Standards

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SCIENCE AND TECHNOLOGY

3.1 Unifying Themes

Fourth Grade Standards:

- Know that natural and human-made objects are made up of parts
- Know models as useful simplications of objects or processes
- Illustrate patterns that regularly occur and reoccur in nature
- Know that scale is an important attribute of natural and human made objects, events and phenomena
- Recognize change in natural and physical systems

Content for Kindergarten	Examples	Supportive Practices
A. Identify and describe what parts make up a whole B. Identify how a part relates to the whole in both natual and human-made objects	**The learner will:** ▪ Play with fraction blocks and puzzles. ▪ Complete a variety of puzzles. ▪ Use geoboards to create shapes & identify attributes that shapes share e.g. 2 triangles can make a square. ▪ Take apart simple toys or safe household items & identify the types and uses of the parts within. ▪ Study common plants to identify the parts and explain their relationship to the whole. ▪ Sort a collection of parts into natural (nuts, twigs, seeds, leaves, etc) and human-made (buttons, laces, zippers, screws, nails, etc). ▪ Use model or toy gear-sets to explore the interdependence of parts in a system.	**The teacher will:** ▪ Integrate the concepts of parts and whole whenever relevant. ▪ Provide a wide variety of manipulatives that children can put together/take apart. ▪ Set up a learning station where children can take apart items, categorize parts and draw conclusions about their functions and relationships to the whole.

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3.1 Unifying Themes *(continued)*

Content for Kindergarten	Examples	Supportive Practices
C. Explore realistic models	**The learner will:** ▪ Explore realistic models through active learning.	**The teacher will:** ▪ Provide realistic models.
D. Explore patterns that regularly occur in nature	▪ Identify natural patterns in leaves, insides of shells, coats of animals, etc. ▪ Replicate natural patterns using appropriate materials in the classroom.	▪ Discuss attributes of a pattern whenever appropriate and drawing children's attention to examples of patterns in the everyday environment. ▪ Provide materials or experiences to help children develop understanding of non-linear patterns, e.g., concentric circles of a raindrop in a puddle, concentric rings of an onion. ▪ Set up a learning station where children can explore patterns from a variety of materials.
E. Identify observable patterns		
F. Develop beginning understanding of natural patterns		
G. Begin to use the understanding of patterns to make predictions		
H. Explore the concept of scale	▪ Select appropriately sized props to use in different types of play, e.g., furniture for a block building. ▪ Use markers and crayons in the art area for drawing to enable child to develop perspective. ▪ Use recyclables to make a model of items from real life, e.g., dinosaurs, boats, planes. ▪ Use blocks and other manipulatives to recreate common structures seen in the neighborhood.	▪ Introduce vocabulary including size comparisons, scale, perspective and symbols when relevant to various learning situations. ▪ Draw children's attention to pictures in books and have them compare the size of pictures to the size of those items in real life. ▪ Set up a learning station where children will explore with n on-fiction books and manipulatives. ▪ Ask thought provoking questions.
I. Begin to use symbols to represent size		

SCIENCE AND TECHNOLOGY

3.1 Unifying Themes

Content for Kindergarten	Examples	Supportive Practices
J. Recognize change K. Examine and explain change through simple observation and recording L. Develop simple understanding about motion M. Describe change to objects caused by heat, cold, light or chemicals	**The learner will:** ▪ Record his/her growth from infancy to kindergarten through the use of photographs, drawings and writing. ▪ Plant seeds, recording the change in their appearance overtime. ▪ Record the seasonal change in the appearance of a tree throughout the year. ▪ Explain fast, slow, forward and backward motion when using manipulatives and toys. ▪ Demonstrate understanding of how to put various items with wheels or without wheels into motion using inclines with different angles, e.g., make ramps in the block area and testing out how far materials will roll when slid down the ramp. ▪ Use dominoes or other similar items to discover motion can be transferred from one item to another. ▪ Investigate animals and their adaptations that enable them to move in different habitats, e.g., the shape of penguin's body, the webbed toes of a frog, etc.	**The teacher will:** ▪ Read books about life cycles of animals and plants, view a movie on the construction of a house or visit a construction site to observe change in natural and physical systems. ▪ Provide learning materials such as puzzles or magnetic games that require children to sequence the steps in a life cycle or to determine the order of events of everyday activities that lead to a change, e.g., the construction of a building from start to finish. ▪ Take children on nature walks to observe and discuss changes in the local plants and animals. ▪ Provide activities for observation and the documentation of change. ▪ Provide nonfiction books that discuss a variety of vehicles that can be put into motion. Build a learning station where children can explore water, wind and gravity as forces that put objects at rest into motion.

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3.1 Unifying Themes

Content for Kindergarten	Examples	Supportive Practices
	The learner will: ▪ Participate in cooking projects that build understanding of changes caused by heat. ▪ Engage in a variety of teacher prepared experiments relating to heat, cold, light and chemical change and will be asked to make predictions, records observations and provide explanations for any change evidenced. ▪ Put common classroom items outside in direct sunlight or shade. Return later to feel and discuss the temperature changes in each of the items.	**The teacher will:** ▪ Have children compare and sequence the speeds of different types of motion, e.g., walking, skating, riding a bike, horse, car, plane, rocket, etc. ▪ Provide building materials in an area of the room where children can design vehicles and record their distance and/or speed using a chart. ▪ Utilize teachable moments like school construction to document physical changes and make a class book. ▪ Set up safe, hands-on experiments/cooking activities to demonstrate changes caused by chemicals, e.g. put plants in a variety of lighting conditions including no light; freeze a variety of common kitchen items like vinegar, milk, water, liquid soap, vegetable oil. Guide children in making predictions using charts or journals, have children record their observations using photos, drawings or writing and provide experiences that prompt children to explain the changes observed. ▪ Create a class book.

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3.2 Inquiry and Design

Fourth Grade Standards:

- Identify and use the nature of scientific and technological knowledge
- Describe objects in the world using the five senses
- Recognize and use the elements of scientific inquiry to solve problems
- Recognize and use the technological design process to solve problems

Content for Kindergarten	Examples	Supportive Practices
A. Build an introductory vocabulary of scientific terms	**The learner will:** ▪ Observe and participate in simple experiments. ▪ Ask questions about their observations. ▪ Predict what might happen next. ▪ Record results of experiments or observations using charts, graphs or journals. ▪ Share conclusions and explanations with other students. ▪ Respond to "what if" questions.	**The teacher will:** ▪
B. Form clear explanations based on observation and participation in common experiments		
C. Connect known ideas with new knowledge to build understanding or refine concepts		
D. Distinguish between scientific fact and a belief through literature		

SCIENCE AND TECHNOLOGY

3.1 Inquiry and Design *(continued)*

Content for Kindergarten	Examples	Supportive Practices
C. Use the five senses as tools with which to: observe, collect information, classify, describe D. Use observation to develop a descriptive vocabulary based on sensory experiences	**The learner will:** ▪ Identify the many ways senses are used. ▪ Identify common items using their senses. ▪ Use vocabulary to describe the degrees of similarities and differences based on use of the five senses.	**The teacher will:** ▪ Provide opportunities for sensory exploration. ▪ Model new vocabulary where appropriate to extend children's observations (e.g. That tree bark feels scratchy. Why do you think it feels rough?). ▪ Provide connections with literature.
E. Demonstrate understanding of the process of scientific inquiry by: • Participating in scientific investigations • Asking relevant questions • Making predictions based on experience or observation F. Demonstrating willingness to modify explanations based on experience or observation	▪ Explore objects, materials and events by acting upon them and noticing what happens. ▪ Describe, compare, sort, and classify observable characteristics and properties. ▪ Record observations, explanations and ideas through multiple forms of representation including drawing, simple graphs, writing and movement. ▪ Listen to others with different perspectives. ▪ Work collaboratively.	▪ Set a clear focus for inquiry. ▪ Provide opportunities to observe and explore to build a broader base of knowledge from which to construct new ideas. ▪ Use scientific talk to support children's thinking.

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3.2 Inquiry and Design *(continued)*

Content for Kindergarten	Examples	Supportive Practices
G. Identify and explain basic problems	**The learner will:** ▪ Identify a problem to be solved. ▪ Pose possible solutions. ▪ Raise questions. ▪ Test possible solutions. ▪ Record steps taken to solve the problem using multiple forms of representations including drawing, writing and movement or by discussion with teacher assistance for charting. ▪ Draw conclusions from results.	**The teacher will:** ▪ Recognize opportunities for problem solving by raising questions. ▪ Engage children in identifying and implementing solutions. ▪ Set up problem solving activities. ▪ Provide materials to test out solutions. ▪ Provide documentation of steps taken and results by charting, posters, photography, or other communication means.
H. Identify possible solutions		
I. Test out solutions		
J. Record steps taken		
K. Record results		

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3.3 Biological Sciences

Fourth Grade Standards:

- Know the similarities and differences of living things
- Know that living things are made up of parts that have specific functions
- Know that characteristics are inherited and, thus, offspring closely resemble their parents
- Identify changes in living things over time

Content for Kindergarten	Examples	Supportive Practices
A. Identify the similarities and differences of living things	**The learner will:** ▪ Document the growth of a living thing through drawings, writing, and/or photos. ▪ Explore the life process of living things (e.g. butterflies, frogs). ▪ Sort animals according to their coverings (e.g. fur, feathers, scales). ▪ Sort animals according to their habitats (e.g. air, land, water). ▪ Identify the basic needs necessary for plants and animals to survive. ▪ Classify animals by their common external characteristics.	**The teacher will:** ▪ Provide samples of living things for students to investigate (e.g. butterfly garden, worm farm, bird feeder outside). ▪ Utilize local resources to broaden children's knowledge of living things, their habitats, and characteristics. ▪ Engage children in studying the needs of living things through growing plants, or taking care of animals. ▪ Use a Venn Diagram to sort animal habitats or characteristics. ▪ Provide connections with literature.
B. Identify the life processes of living things		
C. Sort organisms according to their shared characteristics		
D. Demonstrate a basic understanding of similarities and differences that relate to environmental habitat		
E. Describe basic needs of plants and animals		
F. Know that some organisms have similar external characteristics		

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3.3 Biological Sciences *(continued)*

Content for Kindergarten	Examples	Supportive Practices
G. Understand that living things are made up of parts that have specific functions	**The learner will:** ▪ Investigate the parts of plants. ▪ Describe through writing, drawing or identifying pictures. ▪ Investigate parts of insects. ▪ Determine how the parts make things function (e.g. human body).	**The teacher will:** ▪ Provide opportunities for exploration of parts of plants. ▪ Use diagrams to demonstrate the parts of plants, animals, human body. ▪ Provide nonfiction texts for students to explore parts of living things. ▪ Respond to children's questions with honesty, respect and sensitivity. ▪ Provide connections with literature.
H. Explore characteristics that can be inherited	▪ Identify physical characteristics that appear in parents and their off-spring using pictures. ▪ Document by drawing changes over time of trees or plants. ▪ Observe the behavior of local animals as they prepare for changes in seasons (e.g. rabbits, squirrels, birds).	▪ Provide pictures of adults and their offspring for identification of inherited physical characteristics. ▪ Provide opportunities for children to observe plants and animals over time during seasonal change.
I. Identify characteristics for animal and plant survival identified with seasonal changes		

SCIENCE AND TECHNOLOGY

3.3 Biological Sciences *(continued)*

Content for Kindergarten	Examples	Supportive Practices
J. Describe changes in living things over time K. Record changes in life processes L. Describe basic needs of plants and animals M. Know that some organisms have similar external characteristics	**The learner will:** ▪ Observe living things over different time periods. (a week, a month, seasons). ▪ Document the changes from observations by drawing, writing or in photographs. ▪ Recognize from illustrations the process (sequence) of changes in some living things (e.g. butterfly, frog, , plants from bulbs or seeds).	**The teacher will:** ▪ Provide opportunities for observations of living things over time. ▪ Provide ways for children to document their observations. ▪ Provide illustrations to demonstrate changes in life process. ▪ Provide nonfiction text to illustrate concept of change over time.

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3.4 Physical Science, Chemistry and Physics

Fourth Grade Standards:

- Recognize basic concepts about the structure and properties of matter
- Explore basic energy types and sources
- Explore and describe different types of force and motion
- Describe the composition and structure of the universe and the earth's place in it

Content for Kindergarten	Examples	Supportive Practices
A. Understand the meaning of what matter is B. Describe properties of matter	**The learner will:** ▪ Sort and classify common classroom materials or household items by solid, liquid or gas. ▪ Work with materials at a sensory table filled with water, rice, sand, beans, etc. to explore the properties of solids and liquids. ▪ Use a filter to remove solid material from a mixture at the water table; using a filter to remove larger items from a mixture of solids at the sand table. ▪ Conduct an experiment to convert different common liquids into solids by freezing them and recording results, such as, how long it took to change each substance from a liquid to a solid.	**The teacher will:** ▪ Fill two clear containers. One with solid objects (label solid) and one with colored liquid (labeled liquid). Use another empty container (labeled gas). Explain that all three containers are different forms/states of matter. ▪ Rotate items in the sensory table to include water, rice, beans, soil and sand—materials that reflect a range of properties and can be used with a wide variety of tools or experimentation. ▪ Draw attention to the way different materials behave at the sensory table and in the environment such as: most solids do not lose shape unless another force causes it. Liquid flows and doesn't have a shape. Gas fills the space it is in.

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3.4 Physical Science, Chemistry and Physics *(continued)*

Content for Kindergarten	Examples	Supportive Practices
C. Recognize that matter can change from one state to another	**The learner will:** ▪ Participate in safe, classroom cooking activities to combine substances to create new materials, such as play dough. ▪ Make hypotheses about what will happen to different substances when water, heat or cold is added. ▪ Make an "ocean in a bottle" by adding water and vegetable or baby oil to determine that some liquids do not mix. ▪ Participate in an experiment to observe evaporation and condensation; making predictions and recording results.	**The teacher will:** ▪ Model appropriate vocabulary while facilitating children's interactions with different types of matter, including consistency, texture, thickness, mixture, liquid, solid, etc. ▪ Ask probing questions when children are experimenting with various materials, such as, "What do you suppose will happen to the consistency when we add a liquid?" ▪ Engage children in making predictions while working with different mixtures, such as, "Will the cake batter remain a liquid after we put it in the oven and add heat?" After the cake has baked ask children to think about whether the cake can be turned back into a liquid mixture; ask why they think they way they do. ▪ Set up a learning station where children can design their own play dough recipe using a variety of materials, creating a picture recipe and then testing it out to make play dough. ▪ Provide a variety of cooking experiences on a regular basis. (Make Jello, pasta, hardboiled eggs to demonstrate the substance as a liquid, gas (boiling water steam), and solid. ▪ Utilize nonfiction Big Books and Read Alouds pertaining to matter. ▪ Make graphic organizers. (States of Matter Chart, Changing Matter).
D. Demonstrate an understanding that combining two or more substances can make new materials with different properties		
E. Develop a working vocabulary that manages concepts of material characteristics		

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3.4 Physical Science, Chemistry and Physics *(continued)*

Content for Kindergarten	Examples	Supportive Practices
F. Explore basic energy types and sources	**The learner will:** ▪ Identify energy forms, i.e. sunlight, heat, and motion. ▪ Make rockets with balloons. ▪ Explore stored energy by building rubber band cars. ▪ Demonstrate how energy can be transferred by working with dominoes. ▪ Identify common toys and household items that require an energy source to function. Bring a toy from home to discuss and share the energy source. ▪ Plant two seedlings. Put one in the sunlight and one away from the sunlight. Observe and record what happens.	**The teacher will:** ▪ Create a learning station where children can engage in hands-on experiments to explore sources of energy and the transfer of energy. ▪ Use nonfiction Big Books and Read Alouds. ▪ Ask probing questions, such as, "What is propelling the rocket forward?" Elaborate on children's explanations by introducing appropriate vocabulary, such as, "Yes, the air in the balloon is a source of energy."
G. Explore variations of sound	▪ Use a variety of containers, recyclables and materials to make sound. ▪ Identify if a sound is high or low. ▪ Experiment when applying different force when striking an object or instrument to change the sound produced and discuss the results.	▪ Take children on a sound walk and have them identify sources of sound; take children outside to listen to the rain and the sounds it produces when it strikes different surfaces. ▪ Create a learning station where children can design different simple instruments from recyclable materials.
H. Identify directed air as a source of movement		

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3.4 Physical Science, Chemistry and Physics *(continued)*

Content for Kindergarten	Examples	Supportive Practices
I. Develop a directional vocabulary	**The learner will:** ▪ Describe his/her play with wheeled toys, wind-up toys and boats using directional words such as forward, backwards, sideways, etc. ▪ Create directed air using a variety of items including blowing through a straw, using a paper fan, using an electric fan, squeezing a bellow or hollow container like a ketchup bottle to propel cotton balls through an obstacle course, moving items of different weights across a table surface or boats in a water table. ▪ Engage in art experiences where directed air produces different art effects, such as blowing through a straw to move paint on paper. ▪ Build different toys that are propelled by directed air, such as pinwheels, paper planes, kites, windsocks and parachutes.	**The teacher will:** ▪ Demonstrate how sound produces vibrations by striking a cookie sheet above the head of a drum. Place rice on the drum head and the vibrations from the cookie sheet will cause the rice to jump off the drum head. ▪ Rotate materials in the classroom so that children can explore motion in numerous ways, such as adding inclines and wheeled toys to the block area, adding clear tubing to the water table to observe the movement of water, etc. ▪ Create a learning station where children follow picture directions to create a variety of wind toys. Create a chart to record the conditions outside and the results achieved with each toy. Compare these results with children's attempts to power the toys by creating their own directed air with straws, fans and bellows inside the classroom. ▪ Have children move in different directions (forward, backward, sideways, etc.).

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3.5 Earth Sciences

Fourth Grade Standards:

- Know basic landforms and earth history
- Know types and uses of earth materia
- Know basic weather elements
- Recognize the earth's different water resources

Content for Kindergarten	Examples	Supportive Practices
A. Identify flat land, hills and mountains	**The learner will:** ▪ Use the terms flat land, hills and mountains to describe local spaces in the surrounding community. ▪ Study pictures/maps in fiction and non-fiction books to create a class mural that illustrates the concepts flat land, hills and mountains.	**The teacher will:** ▪ Identify and use books that show the appropriate land forms and draw the children's attention to these concepts. ▪ Take the children on a walk or fieldtrip to experience these landforms. ▪ Provide children with paper-mache and other art materials to create a model of these land forms.
B. Distinguish between three types of earth: soil, rock and sand	▪ Examine materials in a learning center and labeling them as soil, rock or sand and studying soil as weathered rock and decomposed organic remains. Study rocks as pieces of the earth and studying sand as rock particles. ▪ Sort rocks by different attributes on a rock chart.	▪ Rotate soil, sand and different rock types in the sensory table for exploration; add water to these materials too. ▪ Take the children on a dig for soil samples and observing what is in the soil. (worms, leaves, rocks, etc.).

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3.5 Earth Sciences *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B *(continued).* Distinguish between three types of earth: soil, rock and sand	**The learner will:** ▪ Investigate a collection of rocks and compare/contrast them. ▪ Explore the process of erosion by breaking rock into smaller pieces using a wooden hammer and examine sand under a magnifying glass to identify broken pieces of rock and/or shell. ▪ Conduct an experiment where small plants are grown in soil, rock or sand and the results are tracked over time and recorded on a chart. ▪ Explore what a fossil is.	**The teacher will:** ▪ Take the children on a rock discovery walk. ▪ Ask questions about the attributes of the rocks. ▪ Set up a learning center with earth materials where children can examine soil, rock and sand with magnifying glasses, describe their characteristics and classify/sort these items. ▪ Guide the children in collecting a soil sample from a school garden or lawn and investigating its contents; label the contents as soil, rock or sand (possibly introduce the term clay). ▪ Do a hands-on fossil making activity with coffee grinds and objects like leaves or clay, petroleum jelly, and objects to press into the clay.
C. Build a vocabulary of weather related terms	▪ Discuss the weather as it pertains to meaningful events such as going outside for recess, going on a fieldtrip, conducting an experiment that requires sunlight, wind, etc. ▪ Create a mural using different art materials to illustrate the different types of precipitation.	▪ Use nonfiction and fiction big books and read alouds. ▪ Design a learning station where children conduct hands-on experiments to investigate weather concepts, such as, making a cloud in a jar, making hail with different colored clay, building a wind-vane from cardstock and straws, etc.
D. Distinguish between different types of precipitation		

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3.5 Earth Sciences *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Distinguish between clouds and fog F. Explore thermometers as tools for measuring temperature G. Identify how weather affects daily circumstances H. Explain how the different seasons affect plants, animals and daily human life	**The learner will:** ▪ Conduct an experiment using a rain gauge or other water collecting device to discover the difference between drizzle, rain, pouring, etc. ▪ Sort pictures of activities, clothing and toys according to the types of weather and season they would most closely be linked to, e.g. a kite would go with wind, an umbrella with rain, sunglasses with sun, etc. ▪ Create a seasonal collage or booklet. ▪ Conduct an experiment using thermometers to explore the temperatures of liquids found throughout the school grounds, e.g., water from a fountain, the milk in a refrigerator, water from a puddle, paint at the art easel, etc.	**The teacher will:** ▪ Create learning materials where children sort pictures according to weather or season. ▪ Place prisms in the classroom to explore the creation of rainbows and create rainbows outside on a sunny day by sprinkling water in the air. ▪ Chart the daily temperature with the children and at the conclusion of the month transfer this information to a bar or line graph. ▪ Create a daily weather graph. Can use this to compare and contrast monthly weather patterns. ▪ Draw attention to the daily weather report in the newspaper and discuss how weather is not the same in other areas of the state, country or world.
I. Identify stream, river, lake, and ocean J. Explore the difference between fresh and salt-water bodies	▪ Identify streams, lakes, rivers, and oceans on a picture, map or globe in a learning station activity. ▪ Explain what makes water solid and what makes ice melt. ▪ Create a list of the ways water is used in their homes/communities and in the school. ▪ Design a poster suggesting a way to take care of water.	▪ Create a K-W-L chart with the children about what they know about water on Earth. What they want to know and what they've learned at the end of the unit. ▪ Design a learning station for hands-on activities making different bodies of water. ▪ Read books about fresh and salt-water bodies.

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3.5 Earth Sciences *(continued)*

Content for Kindergarten	Examples	Supportive Practices
K. Identify examples of water in solid and liquid states L. Identify a variety of uses for water	**The learner will:**	**The teacher will:** ▪ Expose the children to globes and maps. ▪ Plan visits to local fresh water bodies if appropriate to study the habitat and wildlife ▪ Add appropriate animals to the water table so children can recreate habitats. ▪ Bring icicles into the classroom and discuss what will happen, record how long it takes to melt, put the water back into the freezer—did it take the same amount of time to return to a solid? ▪ Put snow in the sensory table for exploration and encourage the children to describe as well as explain the changes to the pile of snow. ▪ Design a learning station to investigate water as a source of transportation.

SCIENCE AND TECHNOLOGY

3.6 Technology Education

Fourth Grade Standards:

- Know that biotechnologies relate to propagating, growing, maintaining, adapting, treating and converting
- Know that information technologies involve encoding, transmitting, receiving, storing, retrieving, and decoding
- Know physical technologies of structural design, analysis and engineering, finance, production, marketing, research and design

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Identify examples of technology and how these impact various aspects of daily life	▪ Cut out examples of technological devices from magazines, flyers, catalogs, etc. and classifying them on a poster into 3 categories: in my home, in my school, in people's work. ▪ Sort examples of technological devices according to shared functions, e.g., things that send pictures, things that work with numbers, things used to make food, things that send water, things that carry people, etc.	▪ Draw attention to age-appropriate examples of technology throughout the course of study of all themes or topics. ▪ Add discarded technological devices to play areas for exploration, such as, an old typewriter in the writing area, a rotary phone and push-button phone to dramatic play, etc. ▪ Set up projects where children can compare and contrast older technology versus newer technology, such as, make applesauce using a hand-held masher, an applesauce mill and a food-processor. Compare the effort and time it took to prepare the applesauce using each method. ▪ Utilize fieldtrips to inform children about the various forms of technology in the local community and broaden children's understanding of how such devices assist people in using less effort, using less time, creating more of something at one time, etc.

SCIENCE AND TECHNOLOGY

3.6 Technology Education *(continued)*

Content for Kindergarten	Examples	Supportive Practices
B. Identify communication methods that exist in the community C. Discuss common use of information technology including photocopying, photography and video D. Narrate drawings and sketches using computer technology	**The learner will:** ▪ Learn about the varied forms of written communication by making classroom signs, following picture recipes for making paint or cooking, following picture directions for science experiments, using charts and graphs, keeping different types of journals, writing letters to class visitors, sending postcards to their homes, using the computer for writing projects, sending e-mail to a class in another city, etc. ▪ Participate in making a classroom newsletter with the teacher's assistance or newspaper that informs others about what the children are doing in kindergarten from week to week. ▪ Use photography to document various projects or fieldtrips discussed earlier in the science standards. ▪ Use video to record something of interest to share with the rest of the class, e.g., several children may act out a story and videotape it to share with the class during a group time. ▪ Use painting programs to create a design and add text, e.g., if the children wanted to invite parents to school for a special event they could design an invitation on the computer.	**The teacher will:** ▪ Integrate the use of technology in ways that are relevant and meaningful to the children's explorations and play, such as, "If we take a picture of your block structure you will always be able to remember it. We could even write a story about it later." ▪ Direct children to use technology in ways that it will help them to accomplish projects, such as, "If we type out your story on the computer, then we could print out 2 copies and each of you could illustrate the story in your own ways." ▪ Make use of learning opportunities in the local community to explore different forms of communication, such as visiting a newspaper branch, radio station, book publisher, etc. ▪ Design prop boxes from different field trips where children can role-play and integrate information gained from these experiences, such as, set up a television station prop box with interview forms, old microphones, dress up clothes, a "video camera" made from recyclables, etc.

SCIENCE AND TECHNOLOGY

3.6 Technology Education *(continued)*

Content for Kindergarten	Examples	Supportive Practices
E. Identify steps in erecting a building	**The learner will:** ▪ Identify all the possible community helpers that visit the school on a regular basis or that were involved in the building of a school, playground or classroom. ▪ Visit a project under construction or watch a video of something being built or manufactured. List the steps observed. ▪ Use toys and manipulatives to recreate the project and illustrate the different components being coordinated, such as, children could use blocks, pipe cleaners, toy vehicles to recreate the construction of a bridge or use legos to build a miniature grocery store, delivery trucks, etc. ▪ Develop understanding of simple machines by engaging in concrete activities at a learning station. Afterwards identify examples of simple machines in the classroom and in their homes, e.g., levers, hinges, inclines, things that move on wheels, etc.	**The teacher will:** ▪ Identify field trips and other resources for making this information as concrete as possible so that children can experience the concepts through active exploration, e.g., bring in a real-life example of a blue-print, invite an architect to visit the classroom. ▪ Ask thought provoking questions during the children's explorations, "How do you suppose the water reached the new hospital? Do you think it was already there? If not, what community workers were needed? What tools would they have needed to do the work?" ▪ Set up a learning activity or station where children can simulate a real-life construction project using toys, manipulatives, recyclables, etc. Engage the children in the numerous processes of a project, such as, brainstorming ideas together, creating a blue print for the design, gathering materials, ordering or purchasing additional materials with assistance. ▪ Design a learning station where children will conduct concrete experiments to learn about simple machines, e.g., make a lever with blocks, use cylinder cans to roll an item from one end of the table to the other, use a pulley to move material, etc.
F. Develop understanding of the nature of a project as having several components that need to be coordinated		
G. Experiment with simple machines		
H. Identify how materials might arrive at a work site		

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3.7 Technological Devices

Fourth Grade Standards:

- Explore the use of basic tools, simple materials and techniques to safely solve problems.
- Select appropriate instruments to study materials.
- Identify basic computer operations and concepts.
- Use basic computer software.
- Identify basic computer communications systems.

Content for Kindergarten	Examples	Supportive Practices
A. Sort tools by their function	**The learner will:** ▪ Access appropriate tools to assist with a variety of situations, e.g., use a calculator to figure out how many of an item is needed for a project, use a ruler to measure how much fabric is needed to make a parachute for a toy, select a magnifying glass to observe an insect discovered on the playground, etc. ▪ Engage in a class activity where children sort classroom tools according to shared functions or uses. ▪ Play a matching game to identify which tool each community helper uses with their work or job. ▪ Identify appropriate tools to put out for different classroom projects or science experiments.	**The teacher will:** ▪ Rotate classroom tools in all areas to reflect a wide variety of tasks and functions, such as rulers, yardsticks, measuring tape, folding measuring devices, food scales, large scales, spring scales, balances, etc. ▪ Provide a variety of tools for art or writing experiences, such as, hole punches, paper punches, embossers, sticker makers, crimping tools, crocodile scissors, regular scissors, plastic needles, etc. ▪ Encourage children to utilize tools throughout the classroom and with all aspects of the curriculum. ▪ Utilize a wide variety of cooking utensils. ▪ Utilize in-depth projects that encourage children to integrate use of tools—many of the projects listed in the science standards easily lend themselves to this approach.
B. Select appropriate tools and materials to solve simple problems		
C. Develop simple skills to measure, record, cut and fasten		
D. Identify different instruments for measuring weight		
E. Select appropriate instruments for magnifying images to study detail including magnifying glasses and microscopes		

SCIENCE AND TECHNOLOGY

3.7 Technological Devices *(continued)*

Content for Kindergarten	Examples	Supportive Practices
F. Name major parts of the computer (screen, keyboard, mouse, disc drive, etc.) G. Use computer in a variety of applications including beginning writing and graphics, teacher-guided internet research and basic instructional software H. Access information via a web browser with teacher support I. Explore personal communication via E-mail	**The learner will:** ▪ List and collect the tools needed to design a prop box for the classroom that reflects different aspects of life, such as, carpenter's tools, farmer's tools, medical tools, etc. ▪ Make "play tools" when appropriate by studying pictures or real life items; for example, construct an imitation microscope to use in their play. ▪ Use paper and markers to design an imaginary tool or device to do a chore or task in their life. ▪ Have regular computer access during play and structured parts of the day. ▪ Select from a variety of activities on the computer that interest him or her. ▪ Use the computer to enhance other learning taking place in the classroom, such as, create an order form to use with a postal service prop box. ▪ Send an e-mail to a parent, relative or friend with teacher assistance. ▪ Use computer vocabulary while working at the computer. ▪ Identifying topics to explore using a web browser with teacher support and using this information to solve a problem, augment a project, make a book, etc.	**The teacher will:** ▪ Take tools outdoors for children to use for investigations with nature, planting a garden, building a composting box, setting up an outdoors game, etc. ▪ Modelthe appropriate technological terms while working with children at the computer. ▪ Guide children in learning the basic functions of the computer, such as, how to turn it on, how to find programs on the desktop, how to insert a disk properly, etc. ▪ Utilize the computer to enhance other projects that are taking place in the classroom; e.g., Can data collected from a science experiment be inserted into computer generated charts or graphs? ▪ Draw attention whenever appropriate to the many uses for computers in everyday life. ▪ Point out the applications of computers while taking fieldtrips to various places.

Science

Environment and Ecology

Pennsylvania's Kindergarten Standards

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ENVIRONMENT AND ECOLOGY

4.1 Watersheds and Wetlands

Fourth Grade Standards:

- Identify various types of water environments
- Explain the differences between moving and still water

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Identify different bodies of water (e.g., creeks, rivers, streams, ponds, lakes, swamps, ocean) B. Begin to understand the differences between moving and still water	▪ Describe the differences between bodies of water, such as ocean, river, lake, puddle ▪ Identify different bodies of water as seen in pictures and books. ▪ Participate in experiments to determine how water moves	▪ Read fiction and non-fiction books to describe different bodies of water. ▪ Provide photographs of different bodies of water. ▪ Take class on field trips, whenever possible, to experience first hand different bodies of water . ▪ Provide opportunities for learners to participate in experiments to understand the movement of water.

ENVIRONMENT AND ECOLOGY

4.2 Renewable and Nonrenewable Resources

Fourth Grade Standards:

- Identify needs of people (basic)
- Identify products derived from natural resources
- Know that some natural resources have limited life spans

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Identify needs of people (basic)	▪ Distinguish between people's needs and wants. Describe people's basic needs such as sleep and food.	▪ Facilitate class discussions to generate a listing of peoples' basic needs.
B. Identify products that come from nature	▪ Distinguish between something in its natural state and in its manufactured state. ▪ Listen to and discuss stories that describe where things come from, such as sheep's wool and sweater; milk and cheese; tree and paper/furniture; apples and applesauce.	▪ Talking with children about the origin of where things come from. ▪ Read related fiction and non-fiction books.
C. Identify ways to conserve	▪ Generate ways to conserve water at home, in school. ▪ Create illustrations, posters, and/or murals showing ways to save water. ▪ Describe effects of pollution, such as cars' pollution on air, water pollution on fish). ▪ Sort objects into those things that can be recycled and those that cannot.	▪ Facilitate discussions on the importance of water and ways to conserve it. ▪ Help learners understand what can be recycled and reused. ▪ Recycle materials in the classroom. ▪ Help learners understand the hows and whys of recycling. ▪ Take class on a field trip to visit a recycling center. ▪ Read related non-fiction and fiction books. ▪ Facilitate experiments that demonstrate the effects of pollution (oil spills, excessive noise).

ENVIRONMENT AND ECOLOGY

4.3 Environmental Health

Fourth Grade Standards:

- Know that plants, animals, and humans are dependent on air and water
- Identify how human actions affect environmental health

Content for Kindergarten	Examples	Supportive Practices
A. Know that all living things need air and water to survive	**The learner will:** ▪ Observe and describe plants growing in different experimental conditions.	**The teacher will:** ▪ Facilitate class discussions describing the need of all living things to have air and water. ▪ Provide opportunities for learners to observe and record the growth of plants with and without water and with and without air. ▪ Read related non-fiction and fiction books.
B. Identify litter and its effect on the environment	▪ Create a list of things that litter the local environment. ▪ Take a walk around the school or school grounds and pick-up any litter. ▪ Participate in a discussion about the effects of litter on the environment.	▪ Read related non-fiction and fiction books. ▪ Facilitate class discussions about litter and its effect on the environment.

ENVIRONMENT AND ECOLOGY

4.4 Agriculture and Society

Fourth Grade Standards

- Know the importance of agriculture to humans.
- Identify the role of the sciences in Pennsylvania agriculture.

Content for Kindergarten	Examples	Supportive Practices
A. Understand the importance of agriculture B. Identify the components of the farming system, (farmer's role, animals, buildings, land).	**The learner will:** ▪ Make a picture of a farm and the animals that live there. ▪ Identify activities done on a farm, such as planting, milking, shearing. ▪ Identify products that come from a farm, such as wool, milk, eggs, corn ▪ Visit a local farm and see the animals. ▪ Use blocks and model animals to build a realistic farm. ▪ Create and label illustrations that show farm products. ▪ Interview a visiting farmer or master gardener about what they do.	**The teacher will:** ▪ Provide concrete experiences and examples of how and where food comes from. ▪ Take class on a trip to visit a local farm, dairy, and/or grocery store to see where food comes from. ▪ Invite a guest farmer and/or master gardener to visit the classroom to share what they do. ▪ Provide photographs of Pennsylvania farms. ▪ Read related non-fiction and fiction books to expand and deepen background knowledge. ▪ Show a video about farm animals.

ENVIRONMENT AND ECOLOGY

4.6 Ecosystems and their Interactions

Fourth Grade Standards:

- Understand that living things are dependent on nonliving things in the environment for survival
- Understand the concept of cycles

Content for Kindergarten	Examples	Supportive Practices
A. Identify and categorize living and nonliving things	**The learner will:** ▪ Sort living and non-living things. ▪ Create a list of living and nonliving things. ▪ Describe ways in which living things are dependent on nonliving things for survival. ▪ Illustrate and/or describe the cycle of day and night.	**The teacher will:** ▪ Help learners understand what is living and what is nonliving. ▪ Facilitate conversations about the survival needs of living things- those that are living and those that are nonliving. ▪ Display living and non-living items, such as rocks, plants, pets, shells, insects. ▪ Read related non-fiction and fiction books.
B. Begin to understand the concept of cycles		

ENVIRONMENT AND ECOLOGY

4.7 Threatened, Endangered and Extinct Species

Fourth Grade Standards:

- Identify differences in living things
- Know that adaptations are important for survival

Content for Kindergarten	Examples	Supportive Practices
	The learner will:	**The teacher will:**
A. Identify differences in plants and animals	▪ Describe ways in which living things are alike and how they are different. ▪ Recognize and describe the differences between plants and animals.	▪ Provide many opportunities for learners to observe, describe and compare animals and plants. ▪ Provide a variety of opportunities to classify, match, sort, and graph plants and animals. ▪ Read non-fiction to expand and deepen background knowledge.
B. Explain how specific adaptations can help a living organism to survive	▪ Describe how different animals and people adapt to the seasonal temperature changes. ▪ Describe the way in which the body structure of certain animals helps them survive in their environment (e.g., web feet, long neck of the giraffe, beaks).	▪ Help students understand how living things adapt in order to manage change in their environment and for their own survival. ▪ Help students understand the adaptive body structures of certain animals to their environment. ▪ Read non-fiction books to expand and deepen background knowledge.

ENVIRONMENT AND ECOLOGY

4.8 Humans and the Environment

Fourth Grade Standards:

- Identify the biological requirements of humans
- Explain how human activities may change the environment

Content for Kindergarten	The learner will:	The teacher will:
A. Explain how humans can change their environment or their behavior to live	**The learner will:** ▪ Describe how peoples' clothing and specific activities change according to the different seasons. ▪ Draw and describe ways in which peoples' behaviors are different during the night and day. ▪ Describe safety precautions which are used in the dark. ▪ Describe protective clothing and shelter.	**The teacher will:** ▪ Facilitate class discussions about the range of opportunities humans have to alter their environment and/or behavior. ▪ Read literature to expand and deepen background knowledge.
B. Identify human activities that affect the environment	▪ Take care of a garden, plant flowers or trees, put up a bird house, start a compost pile, and/or begin a recycling effort in the school, etc. And describe the impact it has on the environment.	▪ Support learners in looking for and finding community improvement activities. ▪ Facilitate class discussions describing ongoing environmental changes.

ENVIRONMENT AND ECOLOGY

4.9 Environmental Laws and Regulations

Fourth Grade Standards

- Know that there are laws and regulations for the environment

The learner will:	Examples	Supportive Practices
A. Understand how laws and regulations can protect the environment	**The learner will:** ▪ Discuss the importance of following rules. ▪ Describe ways in which the environmental laws and regulations are helpful. ▪ Discuss good environmental practice ▪ Describe how polluting waterways or air will impact natural resources (fish, crops, air).	**The teacher will:** ▪ Facilitate class discussions about the importance of having laws and regulations to ensure the well being of all. ▪ Facilitate class discussions specific to environmental laws and regulations. ▪ Invite people who hold jobs dealing with the environment (e.g., recycling and waste reduction) into the classroom to describe what they do and why it is important.

Social Studies

Pennsylvania's Kindergarten Standards

The foundation for social studies, economics, history and the workings of government begin with children's personal experiences and their initial understanding of themselves in relation to their families, homes and schools. Gradually, students expand their understanding to include communities and the larger world. As their perception grows, they further expand this scope to understand how systems work together. Teachers facilitate children's social studies skill development by helping them engage in active investigations that build knowledge and understanding.

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SOCIAL STUDIES-Civics and Government

5.1 Principles and Documents of Government

Third Grade Standards:

- Discuss what government is
- Explain the purposes of rules and laws and why they are important in the home, classroom, and community

Content for Kindergarten	Examples	Supportive Practice
A. Identify the visible roles that government serves B. Identify the purposes of rules and laws	**The learner will:** ▪ Discuss how rules help to keep us. ▪ Identify rules in school related to fire drills, lunch, walking in the halls, bus safety, etc. ▪ Explain what happens when rules are broken. ▪ Suggest several rules which could make the classroom or the school a better place to work and play. ▪ Demonstrate respect for authority by following classroom and school rules. ▪ Understand that the proper exercise of authority is a form of government.	**The teacher will:** ▪ Arrange for students to take a "special bus ride" where there is a focus on bus safety rules and an explanation about why bus safety rules are important. ▪ Take students on a campus walk to identify important safety considerations and the rules associated with such matters as crosswalks, bus waiting areas, playground, restrooms, etc. ▪ Provide for structured opportunities for children to see the relationship between rules, order, authority, and the existence of governance.

SOCIAL STUDIES - Rights and Responsibilities of Citizens

5.2 Rights and Responsibilities of Citizenship

Third Grade Standards:

- Identify personal rights and responsibilities as they pertain to home, classroom, and society
- Identify civic responsibilities

Content for Kindergarten	Examples	Supportive Practice
	The learner will:	**The teacher will:**
A. Identify personal rights and responsibilities at school	▪ Demonstrate the ability to maintain his/ her personal materials in an orderly manner. ▪ Honor the space and personal property rights of fellow learners. ▪ Help care for classroom and school equipment, tools, materials, and environment. ▪ Understand that respect for others is a responsibility of being a member of a group, such as a classroom group or a school group. ▪ List examples of behaviors which demonstrate good citizenship.	▪ Define the expectations for maintaining order and cleanliness in the classroom and at individual work areas.. ▪ Help learners by defining expectations relative to maintaining order and cleanliness as a learner in the classroom. ▪ Recognize learners who demonstrate traits of good citizenship and character. ▪ Provide an opportunity for learners to talk about or draw pictures of others doing “good deeds”. ▪ Support the children in understanding that everyone has a right to be happy and secure in school. ▪ Support the children in understanding that everyone has the right to be free from teasing and bullying. ▪ Help learners select a school in the school building or in the classroom that will improve those environments.

SOCIAL STUDIES

5.3 How Government Works

Third Grade Indicators:

- Identify services performed by government

Content for Kindergarten	Examples	Supportive Practice
A. Identify services performed by, but not limited to local government	**The learner will:** ▪ Examine pictures of government workers performing service to the community in order to identify what services government performs.	**The teacher will:** ▪ Invite various "guests" to talk with the children about how they help establish or maintain rules (i.e. principal, school police, etc.) or in some way provide government services (fireman, sanitation worker, street maintenance, etc.). ▪ Collect and display pictures of government workers providing services to the community. ▪ Read various stories that demonstrate government services personnel.

SOCIAL STUDIES – Economics

6.1 Economic Systems

Third Grade Standards:

- Describe how families, school, and communities with limited resources make choices
- Identify local economic activities (employment)
- Identify local businesses opening or closing

Content for Kindergarten	Examples	Supportive Practice
	The learner will:	**The teacher will:**
A. Identify the role of people in a community and what they do to make a living	▪ Match simple descriptions of work which people do in a community with pictures illustrating the jobs. ▪ Recognize how jobs are similar and different. ▪ Practice exchanging play money for make believe goods to demonstrate the process of buying and selling. ▪ Identify reasons people might save money for the future. ▪ Discuss the difference between goods and services and compile a list of each category. ▪ Give examples of how people can be both buyers and sellers of goods and services. ▪ Identify different kinds of resources (human, natural, and capital) that help us provide for our needs and wants.	▪ Read and discuss trade books describing different jobs. Discuss why people have to work and what motivates them to do their work. ▪ Invite parents and/or community members to share their work. ▪ Create any number of classroom simulations that involve economic decision-making in the family, school or community. (e.g., set-up a supermarket or other store in the classroom). ▪ Read and discuss trade books describing producers and resources (natural, human, capital). ▪ Take learners on a tour of the community while highlighting what each business does, how it serves the members of the community and its length of existence. ▪ Provide various pictures from magazines which can be used by learners to identify various kinds of resources.

SOCIAL STUDIES - Economics

6.2 Scarcity and Choice

Third Grade Standards:

- Identify scarcity and limited resources
- Identify needs of people
- Identify wants of people
- Explain how wants are often confused with needs in making choices

Content for Kindergarten	Examples	Supportive Practice
A. Identify scarcity as the concept that all resources are limited (i.e., why all of us can't have everything we want)	**The learner will:** ▪ Recognize the difference between basic needs and wants by providing common examples of each consideration. ▪ Explain how scarcity often prevents us from having everything we want or need. ▪ Practice the process of making wise choices involving needs and wants. ▪ Identify from pictures the needs and wants of people.	**The teacher will:** ▪ Create activities in which learners gain practice and insight into making wise choices by identifying the needs and wants of people. ▪ Provide pictures for learners to use in the process of clarifying the difference between needs and wants. ▪ Help learners reflect on how wants are sometimes confused for needs.

SOCIAL STUDIES - Economics

6.5 Work and Earnings

Third Grade Standards:

- Explain why people work to get goods and services
- Identify different occupations

Content for Kindergarten	Examples	Supportive Practice
A. Explain why people work	**The learner will:** ▪ Explain why adults work. ▪ Identify the occupation of parents, caretakers, and/or other known adults. ▪ Name occupations and what they do. ▪ Identify an occupation that they would like ▪ Draw a picture and write about an occupation ▪ Dress like a worker for a particular occupation.	**The teacher will:** ▪ Create a list of the things people use money to purchase. ▪ Read various stories about occupations. ▪ Invite guests into the classroom to describe their occupations.

SOCIAL STUDIES - Geography

7.1 Basic Geography Literacy

Third Grade Standards:

- Identify geographic tools and their uses

Content for Kindergarten:	Examples	Supportive Practice
A. Identify the following geographic tools: maps, globe, map elements, diagrams, and photographs	**The learner will:** ▪ Use maps as tools that show actual representations of real places. ▪ Use maps to identify and locate familiar places or objects within the classroom or school environment. ▪ Make maps, using blocks or paper and pencil to represent familiar places such as the classroom, the school playground, or their home environment. ▪ Use maps or pictures to identify relationship, such as what object or place is located near some other object or place.	**The teacher will:** ▪ Create authentic situations in which students practice using a map to get quickly and efficiently from one place to another (i.e. how to get to the bathroom, the playground, the office, the lunchroom, etc). ▪ Support learners in the construction/building of a three-dimensional representation of a familiar environment such as their bedroom, classroom, or playground. ▪ Provide learners with high quality developmentally appropriate geographic tools.

SOCIAL STUDIES – Geography

7.2 The Physical Characteristics of Places and Regions

Third Grade Standards:

- Identify the physical characteristics of places

Content for Kindergarten	Examples	Supportive Practice
A. Identify physical characteristics of places, noting physical properties (landforms such as swamps, hills, and mountains), bodies of water such as creeks, rivers, ponds, lakes, and human forms such as highways, streets, buildings, bridges	**The learner will:** ▪ Respond to pictures of places by describing the physical characteristics. ▪ Discuss the impact the physical features of an environment have on the people who live there. ▪ Distinguish between human forms, such as roads and buildings, and physical characteristics.	**The teacher will:** ▪ Take learners on a walking tour of the playground, neighborhood, and/or another local site and discuss the physical features.

SOCIAL STUDIES - Geography

7.3 The Interaction Between People and Places

Third Grade Standards:

- Identify the impacts of physical systems on people
- Identify the impacts of people on physical systems

Content for Kindergarten	Examples	Supportive Practice
A. Identify how physical systems impact people (e.g., soil quality for agriculture)	**The learner will:** ▪ Discuss how the temperature gets warmer or colder as the seasons change and how these seasonal changes cause people to respond. ▪ Discuss how farms are displaced by housing developments and shopping centers and how this impacts our society. ▪ Discuss the way in which natural resources help us produce things needed to live e.g., rich soil, pure streams). ▪ Create a list of things people do to negatively impact the environment.	**The teacher will:** ▪ Take learners to places where they can appreciate human and/or natural resources (e.g., farms, greenhouses). ▪ Create an opportunity for learners to grow plants with different soil conditions and to discuss ways to positively influence the environment. ▪ Investigate the idea of creating a composting pile. ▪ Establish a school or classroom recycling initiative. ▪ Share regional and community current events that illustrate the theme of environmental interaction.

SOCIAL STUDIES - History

8.1 Historical Analysis and Skills Development

Third Grade Standards:

- Distinguish between past, present, and future.
- Develop an understanding of historical sources.
- Understand fundamentals of historical interpretation.

Content for Kindergarten	Examples	Supportive Practice
A. Understand chronological thinking through days, weeks, months, years (calendar time) B. Begin to develop an understanding of historical interpretation.	**The learner will:** ▪ Create a personal timeline with photographs and/or drawings from birth to present. ▪ Practice past, present and future time with a classroom calendar and daily monthly weather recording. ▪ Place photographs of school and classroom events in order based on when the event happened. ▪ Inquire about history through the process of meeting and talking with grandparents and senior citizens in the community.	**The teacher will:** ▪ Use a class calendar to chart the weather recording to support learners in thinking about the past, present, and future. ▪ Provide opportunities for grandparents and senior citizens to visit the classroom to provide learners with living history lessons. ▪ Take and collect photographs of various class and school for learners to order by days, weeks, months, or years. ▪ Expose learners to historical interpretation through storytelling, folklore, and national holiday celebrations.

SOCIAL STUDIES - History

8.3 United States History

Third Grade Standards:

F. Identify contributions of individuals and groups to United States history

G. Identify and describe primary documents, materials artifacts and historic sites important in United States history

Content for Kindergarten	Examples	Supportive Practice
A. Identify important individuals that contributed to United States history.	**The learner will:** ▪ Identify George Washington as the first President of the United States. ▪ Identify the current President of the United States. ▪ Recognize the Pilgrims as one of the first groups of settlers in the United States. ▪ Understand the Native Americans were living in the United States before any settlers arrived. ▪ Identify the United States Flag. ▪ Name the colors in the United States Flag. ▪ Recite the Pledge of Allegiance. ▪ Recognize the tune of the National Anthem and show respect for the song.	**The teacher will:** ▪ Read and discuss literature about George Washington. ▪ Introduce the President of the United States with literature, pictures and perhaps video clips of televised appearances. ▪ Read, retell, and recreate the Thanksgiving story involving the Pilgrims and Native Americans. ▪ Give opportunity to make a replica of the flag. ▪ Introduce the Pledge of Allegiance and make time to recite it daily. ▪ Introduce the National Anthem as an important song of the United States.

Appendix - Kindergarten Committee Participants

Anderson, Cindy	Lancaster Lebanon Intermediate Unit #13
Bagnato, Dr. Stephen	Early Childhood Partnerships, The UCLID Center, Children's Hospital of Pittsburgh
Barone-Martin, Carol	Pittsburgh Public Schools
Black, Shirley	Pennsylvania Department of Education
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Buckner, Debra	North Penn School District
Cameron, Kelly	Halifax Area School District
Chrisman, Dr. Kent	Shippensburg University
Cleary, Sherry	University Development Center
Coates, Michelle Linder	Philadelphia School District
Coldwell, Karen	Phoenixville Area School District
Cornell, Beth	Pennsylvania Department of Education
Daschbach, Jane	Pennsylvania Department of Education
Dichter, Harriet	Pennsylvania Department of Public Welfare
Cleland, Dr. Fran	West Chester University
Eash, Karen	Chestnut Ridge School District
Elliot, Sue	East Lancaster County School District
Eyler, Kay	Juniata County School District
Feldman, Cathy	Reach Associates
Fleck, Sheryl	McGuffey School District
Francis, Sue	Cumberland Valley School District
Giza, Dr. Marcia	Berks County Intermediate Unit
Gnora Roesch, Michele	Pittsburgh Public Schools
Grant, Susan	Iroquois School District
Grinder, Dr. Elizabeth	Penn State University
Heath, Marsha	Girard Area School District
Hiberman, Ira	Stroudsburg School District
Hoskins, Maryanne	Norristown Area School District
Hudson, Kelly	Pennsylvania Department of Education
Jackson, Renee	Philadelphia School District
Janssen, Dawn	Penn Manor School District
Kindergarten Staff	Franklin Area School District
Kindt, Julie	Berwick Area School District
Krause, Kristin	School District of Lancaster

Laufer, Clare	Penn Hills School District
Leuthe, Kristen	Central Bucks School District
Lindbergh, Karen	Reading First
Lyerly, Robert	Philadelphia School District
Magaha, Anne Marie	Abington School District
Male, Kim	Nazareth School District
McGough, Christine	Upper Adams School District
McMullen, Linda	Fairfield Area School District
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Mitchell, Sue	Pennsylvania Department of Education
Mitsos, Nancy	Pennsbury School District
Moyer, Theo (Tat)	Palisades School District
Oberholser, Cheryl	Pennsylvania Department of Education
Oldroyd, Scott	Troy Area School Distric
Osborne, Donna	Penn Hills School District
Panepinto, Dyann	Allegheny Intermediate Unit
Patte, Michael	Bloomsburg University
Perry, Sally	Ephrata Area School District
Pleczynski, Natalie	Pittsburgh Public Schools
Potteiger, Andrew	Hamburg Area School District
Prall, Jeanie	Riverside School District
Quinter, Jessica	Juniata Valley School District
Reynolds, Wanda	Connellsville Area School District
Reuvenny, Debbie	Harrisburg School District
Robbins, Diane	Titusville School District
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Schooling, Margaret	School District of Lancaster
Snyder, Cindy	Northwest Tri-County IU5 MAWA Agency
Sweet, Marni	The Parent Infant Center
Szczurek, Peg	Delaware Valley Association for the Education of Young Children
Tingley, Sarah	Bradford Area School District
Vathis, Patti	Pennsylvania Department of Education
Yates, Denise	Pittsburgh Public Schools
Wilhelm, Elizabeth	Child Care Consultants
Williams, Danielle	Shikellamy School District
Williams, Jennifer	Tobyhanna Army Depot/Dept of Defense
Willis, Susan	Central IU 10 MAWA Agency
Witherspoon, Donna	Greater Latrobe School District
Witmer, Judy	Hildebrandt Learning Center
Yohn, Wendy	Springfield School District